HiFi Solves Sub-fertility Consortium in Asia Pacific Reports First Major Study Using HiFi Long-Read Sequencing to Investigate Unexplained Subfertility and Recurrent Pregnancy Loss

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Multinational study shows how one comprehensive genomic workflow and secure data collaboration may help reduce fragmented testing for couples seeking answers

MENLO PARK, Calif., May 11, 2026 (GLOBE NEWSWIRE) -- PacBio (NASDAQ: PACB), developer of the world's most advanced sequencing technologies, today announced the publication of a preprint describing the first major study from the HiFi Solves Sub-fertility Consortium in Asia Pacific. The study highlights how HiFi whole genome sequencing could give researchers a more complete view of reproductive genetics in one workflow, while enabling institutions across Asia-Pacific to analyze data through a shared, federated framework.

Subfertility affects approximately 1 in 6 couples globally, yet genetic evaluation often remains fragmented, requiring multiple sequential tests that can take months or years and still leave couples without a clear genetic explanation**.** For many couples, genetic testing is not a single answer-seeking moment in time. It is a sequence of separate investigations, each looking at only part of the genome. HiFi sequencing offers a more comprehensive approach by assessing multiple variant types in one workflow, which may help reduce repeat testing, shorten the path to insight, and support more informed reproductive counseling.

In this multicenter study, researchers recruited 96 individuals (47 couples and 2 individual participants) across five leading institutions in Singapore, South Korea, Thailand, and Taiwan. The study focused on couples with unexplained subfertility (>= 1 year) or recurrent pregnancy loss after standard clinical evaluations had ruled out known causes.

Of these, 84 individuals underwent PacBio HiFi whole genome sequencing, enabling comprehensive analysis of multiple forms of genomic variation in a single assay. HiFi sequencing enabled improved resolution of complex and repetitive genomic regions that are difficult to assess using conventional approaches, while also allowing characterization of variants across both partners, reflecting the shared genetic contribution to subfertility. To support collaboration across countries and institutions, the consortium used DNAstack's federated analysis framework to harmonize analysis while keeping data securely managed by participating sites.

"Subfertility and recurrent pregnancy loss often involve heterogeneous and complex genetic factors that are not fully captured by conventional testing approaches," said Dr. Saumya Jamuar, corresponding senior author of the study. "Through the HiFi Solves Subfertility Consortium in Asia-Pacific, we were able to bring together multiple leading centers to apply a standardized long-read sequencing approach across diverse patient populations. This collaborative framework enables us to generate robust, comparable datasets at scale, which is critical for understanding the genetic architecture of these conditions. By using HiFi long-read genome sequencing, we can assess multiple variant types in a single test, which may help reduce the need for sequential investigations and, as more evidence is generated, could support evaluation of this approach as a first-line genomic test in subfertility."

Even in a highly selected cohort where standard evaluations had already ruled out known causes, HiFi sequencing identified clinically relevant genomic findings in approximately one in 10 couples. Likely diagnostic genetic findings were identified in 4.8% of individuals, while additional variants of uncertain significance may inform future research.

"PacBio HiFi long-read sequencing provides a powerful and reliable approach for resolving complex reproductive genetic cases that remain unexplained using conventional testing," said Professor Ming Chen, Professor and Laboratory Director at Changhua Christian Hospital Medical Center, Taiwan. "This study highlights the importance of collaborative, multi-center efforts in advancing reproductive genomics and improving our understanding of subfertility and recurrent pregnancy loss."

"This is exactly why HiFi Solves exists," said Christian Henry, President and Chief Executive Officer of PacBio. "When leading institutions contribute data, expertise and infrastructure, the field can move faster. This study shows how a single, comprehensive HiFi sequencing workflow can help researchers generate stronger evidence for complex reproductive genetics."

The HiFi Solves Sub-fertility Consortium in Asia Pacific was launched at PRISM Asia 2024 to advance long-read sequencing in reproductive genomics. Its first major findings will now be presented at PRISM 2026 in Fukuoka, Japan, showing the consortium's progress from formation to multi-center evidence generation.

Next, the consortium plans to expand recruitment across additional Asia-Pacific centers, evaluate broader multi-omic approaches, and explore scalable sequencing workflows that could improve accessibility and cost-efficiency for future reproductive genomics studies. As PacBio advances scalable workflows such as SPRQ-Nx, the consortium expects to evaluate approaches that could support more accessible, cost-efficient reproductive genomics research at larger scale.

This study builds on the broader, global HiFi Solves Consortium, which aims to accelerate discovery, empower researchers, and improve outcomes in rare and genetically complex diseases through global collaboration.

Learn more at pacb.com/HiFi-Solves.

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.

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 statements relating to the uses, advantages, quality or performance of, or benefits or expected benefits of using, PacBio products or technologies, including in connection with the HiFi Solves consortium; how one comprehensive genomic workflow and secure data collaboration may help reduce fragmented testing, giving researchers a more complete view of reproductive genetics, including multiple variant types, in one workflow, which may help reduce repeat or sequential testing, shorten the path to insight, support more informed reproductive counseling, and potential approach as a first-line genomic test in subfertility; potential benefits to families in search of answers; potential to become a front-line assay for researchers; that a single, comprehensive HiFi sequencing workflow could help researchers generate stronger evidence for complex reproductive genetics; the impact of PacBio sequencing on human health; consortia plans to expand recruitment across additional Asia-Pacific centers, evaluate broader multi-omic approaches, and explore scalable sequencing workflows that could improve accessibility and cost-efficiency for future reproductive genomics studies; and other forward-looking statements. Reported results and orders for any instrument system should not be considered an indication of future performance. You should not place undue reliance on forward-looking statements because they are subject to assumptions, risks, and uncertainties that could cause actual outcomes and results to differ materially from currently anticipated results, including, challenges inherent in developing, manufacturing, launching, marketing and selling new products; rapidly changing technologies and extensive competition in genomic sequencing; unanticipated increases in costs or expenses, including in connection with semiconductor components, such as memory chips; interruptions or delays in the supply of components or materials for, or manufacturing of, PacBio products and products under development; potential product performance and quality issues and potential delays in development timelines; the possible loss of key suppliers; and, third-party claims alleging infringement of patents and proprietary rights or seeking to invalidate PacBio's patents or proprietary rights. 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.

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