

15AGW Technology Presentation

2025/07/02 (Wed)

14:30-15:00 PacBio

14:00-14:30 Scrum Inc. 15:00-15:30 BioStream Co., Ltd

Advancements in PacBio HiFi Sequencing: Enhancing Genomic Resolution and Accessibility

Speaker :

Khi Pin Chua Ph.D.,

Staff Bioinformatics Scientist, Computational Biology,
PacBio



Dr. Khi Pin Chua

Seminar abstract :

Over the past 18 months, PacBio's HiFi sequencing technology has undergone significant advancements in various aspects, broadening its applications in genomics and transcriptomics.

The introduction of the Kinnex full-length RNA sequencing technology has improved throughput and accuracy in transcriptome analysis, enabling isoforms-level quantification. The development of Fiber-Seq and CiFi (HiFi-based Hi-C) have provided deeper insights into chromatin architecture and long-range genomic interactions, especially in regions of the genomes that are extremely challenging to conventional short-reads sequencing technology.

The SPRQ chemistry represents a substantial enhancement in sequencing efficiency and economy, reducing DNA input requirements by fourfold to 500 ng and increasing data output by 33% per SMRT Cell. Complementing this, the Ampli-Fi technology offers accessibility to long-reads for challenging samples with limited DNA material (e.g. FFPE), requiring as little as just 1 ng of DNA to generate comprehensive genomic data.

Finally, the launch of the Vega system provides a lower cost and compact benchtop platform capable of delivering HiFi data similar to the Revio system, thus extending the reach of advanced sequencing technologies to a broader range of laboratories.

Together, these developments support a multi-omics view of the same sample through sequencing the genome, methylome, chromatin architecture, and transcriptome. They markedly improve resolution, reduce per-sample cost, and broaden long-read sequencing to projects previously limited by throughput, budget, or input material.

ブース展示# 2 にて、システムおよびアプリケーションをご案内中
ぜひお立ち寄りください

Please visit us at booth #2 to learn more about our
systems and applications.



PacBio Vega system