

Applications of Hi-C technology

Abstract

Hi-C is a method for mapping the three-dimensional (3D) structure of chromosomes within the nucleus of a cell. The Hi-C method works by crosslinking and ligating genomic DNA fragments in situ, followed by high-throughput sequencing to determine the proximity of genomic loci. This information is used to build a map of chromosome interactions, which provides insights into the functional relationships between genomic elements and their roles in gene regulation, genome stability, and cellular processes. In addition, it has widely used to scaffold draft genomes to chromosomal scale which provide the contiguity to the draft genomes. The advent of Hi-C opened the door for researchers to study the 3D organization of the genome and its role in fundamental biological processes as well as produce high quality reference genomes.

Speaker Information

Name: Leaw Chui Li

Position: Head of Commercial, APAC



Chui-Li is the Head of Commercial, APAC for Dovetail Genomics, overseeing all business operations in the APAC region. Previously, she served as the Senior Manager of the Service and Support organization at Illumina, effectively managing Field Applications scientists, Field Service Engineers, and Technical Support Scientists across diverse countries in South Korea, Southeast Asia, and India. With over 25 years of experience in the Life Sciences industry, Chui-Li possesses a robust research background. She has held roles as a Research Scientist in various companies, leading projects encompassing drug discovery programs and fundamental scientific research utilizing proteomics and genomics technologies. Additionally, she has contributed to the field as a Scientific Officer and Medical Technologist during the early stages of her career.

Dovetail Genomics 技術紹介

「Dovetail Genomics の次世代 Hi-C 関連技術紹介」

染色体スケールの高精度ゲノムアセンブリや、TAD、Loop といった 3D クロマチン構造解析、プロモーター・エンハンサー相互作用の高解像度な検出など、など様々なアプリケーションに対応できる、Dovetail Genomics の次世代 Hi-C (Omni-C/Micro-C/HiChIP/pChIP-C など) 関連技術をご紹介します。

【演者】

越後 輝敦

トミーデジタルバイオロジー株式会社

アライアンスプロダクト

アプリケーションスペシャリスト