



Unravelling Gene Regulation using Dovetail® Pan Promoter Panel

Advancements in genomics have revolutionized our understanding of gene regulation, paving the way for ground-breaking discoveries in various fields, from developmental biology to disease research. At the forefront of this transformative landscape is the Dovetail Pan Promoter Panel, a genomics tool designed to unravel the intricacies of gene regulation.

In this seminar, we invite you to embark on a journey into the world of regulatory genomics and explore the power of the Dovetail Pan Promoter Panel. Led by renowned experts in the field, this seminar will delve into the unparalleled capabilities of the panel and its potential to unlock the hidden secrets of gene expression.

Date: 30th August, 2023

Time:

9:00 AM – 11:00 AM (Singapore, Kuala Lumpur, Beijing)

1:00 PM – 3:00 PM (Auckland, New Zealand)

“Webinar Registration Link”



Speaker 1: Professor Yasuhiro Murakawa, Kyoto University Institute for Advanced Study (KUIAS)

Dissecting human disease pathways using high-resolution chromatin contact maps

Large-scale genome-wide association studies (GWAS) have yielded an increasing number of disease-associated genomic loci. However, the functional interpretation still largely remains unclear. Recently, it has become apparent that disease-associated genetic variants are often found within enhancers. Enhancers act to strongly enhance the expression of their target genes in a cell-type specific fashion by physically associating with their promoters. We have developed a 5'-end single-cell RNA sequencing approach to comprehensively map active enhancers from heterogeneous helper T cells. By integrating with GWAS datasets, we identified hundreds of human enhancers associated with autoimmune diseases. To gain important clues to human disease pathways, here we used Micro-C as well as promoter-capture Micro-C, methods that can analyze chromatin interactions with super-high resolution. We systematically identified target genes of these enhancers revealing novel human disease molecular mechanisms. In sum, we provide a general framework to investigate molecular mechanisms underlying human diseases.



Speaker 2: Dr Myriam Elkhawand, PhD. Customer Success Manager, Dovetail Genomics

Setting up the Dovetail® Pan Promoter Assay in the lab

In this second talk, Dr. Myriam will delve into the details of Dovetail Pan Promoter protocol and library quality control measures that play a pivotal role in assessing the success of the assay. She will discuss best practices in carrying out the assay and library QC.

Webinar Registration link