

Precision Genomic Medicine (基因體精準醫學)

生物科技學院 基因體精準醫學 (藥物-/免疫-/單細胞-基因體學) 實驗室 柯泰名 助理教授

> Immunogenomics

T-cell receptor/B-cell receptor/HLA

Platform:

Identify "whole and unbiased" sequence information of immune repertoire and develop the related analysis

Application:

- 1. Infectious diseases
- 2. Immunotherapy (Cancer)

Collaborators:

- China Medical University
- Academia Sinica

Single cell genomics

Single-cell-transcriptome/immune profiling/-others

Platform:

Identify "single-cell level" transcriptome data, related genomic information and develop the related analysis

Application:

- 1. Biology (eg., cancer biology)
- 2. Medicine (eg., cell therapy)

Collaborators:

- China Medical University
- Academia Sinica
- Hong Kong City University

Pharmacogenomics

Genome-wide association studies

Platform:

Identify genetic variants associated with human phenotypes, especially for drug efficacy and side effects

Application:

- 1. Adverse drug reactions
- 2. Efficacy of treatment

Collaborators:

- National Center for Genome Medicine
- Academia Sinica
- Veterans General Hospital

(Ko et al., JACI, 2011) (Ko et al., Circulation Research, 2015) (Ko et al., BMJ, 2015) (Ko et al., Human Molecular Genetics, 2018)