

大学院学生各位  
To All Graduate Students



2024 年度  
基盤医学特論 開講通知  
Information on Special Lecture Tokuron 2024.4-2025.3

題目： ゲノムワイド関連研究 (GWAS) とメンデルランダム化解析

Title: **Genome-Wide Association Studies (GWAS) and Mendelian Randomization (MR) Analysis**

講師：Kwok Kei Mak (所属: 糖鎖生命コア研究所)

Teaching Staff: Kwok Kei Mak (IGCORE Research Institute, Nagoya University)

日時：令和 6 年 7 月 1 日(月) 16 時 00 分~17 時 30 分

Time and Date: 1 July 2024 16 : 00~17:30

場所：基礎研究棟 1 階 会議室 1 (学務課前)

Room: Meeting Room 1 , (Basic Medical Research Building, 1st floor)

言語： 英語 / 日本語 Language: English and Japanese

**Overview**

Genome-wide association studies (GWAS) and Phenome-wide association studies (PheWAS) are emerging epigenomics approaches to examine the associations between disease phenotypes and biomarker-determined genetic variations of big data from cohort studies and biobanks. In this seminar, the speaker will present the schemas of GWAS statistics, including data preprocessing, data generation, and association analysis of omics data. Conceptual and practical issues of GWAS, mainly Mendelian randomization as a form of instrumental variable analysis will be explained. Approaches including two-sample and two-step Mendelian randomization, machine learning, and GWAS meta-analysis will also be illustrated using bioinformatic tools. Moreover, eminent cohorts and biobanks, including the Human Glycome Atlas Project of the Institute for Glyco-core Research will be introduced. No prerequisites, students of all disciplines are welcome.

(事前の申込みは不要です。No Registration Required.)

※関係専門分野・講座等の連絡担当者：分子細胞化学 岡島徹也 (内線 2068)

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