

“Deciphering Genome Big Data”

Program

Opening Address Yoshinori Murakami (Dean of IMSUT)

Plenary Lecture-1

9:40-10:40 Transformation of big data into clinically actionable knowledge; Driving the genomic medicine revolution
Elizabeth Worthey, Ph.D.
(HudsonAlpha Institute for Biotechnology, USA)

Session-1: Cancer Genome and Beyond

10:45-11:25 Deconstruction of the cancer genome by mutational signature
Tatsuhiko Shibata, M.D., Ph.D. (The University of Tokyo, Japan)

11:30-12:10 Multi-omics analysis of cancer cells
Yutaka Suzuki, Ph.D. (The University of Tokyo, Japan)

12:10-13:30 Lunch

Session-2: Translation of Genome Data for the Diagnosis and Care of Patients

13:30-14:10 Identification of deleterious genetic changes in familial and rare cancers and application of their information for personalized healthcare
Yoichi Furukawa, M.D., Ph.D. (The University of Tokyo, Japan)

14:15-14:55 Rare variants in rare diseases
Naomichi Matsumoto , M.D., Ph.D. (Yokohama City University, Japan)

Plenary Lecture-2

15:00 -16:00 Deciphering whole genome sequencing data at scale, and in the clinic, for rare disease and cancer diagnosis
Mark Cowley, Ph.D. (Garvan Institute of Medical Research, Australia)

16:00-16:20 Coffee Break

Session-3: Genome Big Data and Healthcare

16:20-17:00 Big data science with genome cohort: Tohoku Medical Megabank Project
Jun Yasuda, M.D., Ph.D. (Tohoku University, Japan)

17:05-17:45 Statistical genetics, disease biology, and drug discovery
Yukinori Okada, M.D., Ph.D. (Osaka University, Japan)

Closing Address Satoru Miyano (IMSUT)