



THE 16th SUGIYAMA LABORATORY RIKEN OPEN SYMPOSIUM

“Challenges and Opportunities of New Concepts and Tools for predicting drug clearance, interindividual differences and drug interactions”

--- On the occasion of Yuichi Sugiyama's Retirement from RIKEN---

Date: Day1: 13:00-17:15, November 16th (Mon) , 2020
Day2: 9:30-17:10, November 17th (Tue) , 2020
Venue: RIKEN Yokohama Main Office Building Hall
Language: English

Co-chairs;

Takashi Yoshikado (Yokohama University of Pharmacy, Japan / RIKEN)

Kazuya Maeda (The University of Tokyo, Japan / RIKEN)

Day1: November 16th , 2020

- 13:00-13:10 Opening remarks
Yuichi Sugiyama (Sugiyama Laboratory, RIKEN, Japan)
- 13:10-13:45 **[Keynote Lecture 1] Web**
IVIVE: Evaluating the Boundary Conditions.
Leslie Z. Benet (University of California, San Francisco, U.S.A.)
- 13:45-14:20 **[Keynote Lecture 2] Web**
Deorphaning Transporters in the SLC22 Family: Implications for interindividual variation in drug response.
Kathleen M. Giacomini (University of California, San Francisco, U.S.A.)
- 14:20-14:45 Advances in the endogenous biomarkers for transporter-mediated drug drug interaction risk assessment.
Hiroyuki Kusuvara (The University of Tokyo, Japan / RIKEN)
- 14:45-15:10 **Web**
Shedding light on in vivo target occupancy via PBPK Modeling with saturable target binding: the cases of small-molecule drugs with high-affinity targets.
Woojin Lee (Seoul National University, Korea / RIKEN)
- 15:10-15:35 Coffee break
- 15:35-16:00 Characterization of the intestinal transport of drugs with human-derived tissue samples.
Kazuya Maeda (The University of Tokyo, Japan / RIKEN)



- 16:00-16:35 **【Keynote Lecture 3】 Web**
Reflections on clearance.
Malcolm Rowland (University of Manchester, UK)
- 16:35-17:10 **【Keynote Lecture 4】 Web**
Liquid Biopsy Enables Quantification of Hepatic Capacity for Drug Metabolism and Disposition beyond the Impact of Genetics.
Amin Rostami (University of Manchester, UK)
- 17:10-17:15 Closing remark and a note for banquet
Kazuya Maeda (The University of Tokyo, Japan / RIKEN)

Day2: November 17th, 2020

- 9:30-9:55 A new parameter optimization algorithm for the PBPK model analyses using Cluster Gauss-Newton method:
Yuichi Sugiyama (Sugiyama Laboratory, RIKEN, Japan)
- 9:55-10:30 **【Keynote Lecture 5】 Web**
Regulatory perspective on clinical pharmacology strategy for drug development.
Shiew Mei Huang (U.S. Food and Drug Administration, U.S.A.)
- 10:30-11:05 **【Keynote Lecture 6】 Web**
Meeting the challenges in quantitating individual clearance pathways by reaction phenotyping.
Scott Obach (Pfizer, U.S.A.)
- 11:05-11:30 **Web**
Integrating translational approaches to study transporter-mediated drug disposition and DDIs: an industry perspective.
Xiaoyan Chu (Merck Sharp & Dohme Corp., U.S.A.)
- 11:30-11:55 **Web**
Use of transporter endogenous biomarker to elucidate the mechanisms of complex DDIs and to support concomitant medication recommendations.
Kenta Yoshida (Genentech, U.S.A.)
- 11:55-12:50 Lunch
- 12:50-13:15 **Web**
Joint East Asian Phase 1 studies - we are not so different!
Jasminder Sahi (Sanofi K.K., China)
- 13:15-13:40 Comprehensive PBPK Model of Rifampicin for Predicting Complex Drug-drug Interactions: Induction and Inhibition Effects for Metabolic Enzymes and Transporters.



Ryuta Asaumi (Ono Pharmaceutical Co., Ltd., Japan)

- 13:40-14:05 Demonstration of the mechanism underlying the time-dependent inhibition of Cyclosporin A on OATP1B1, and development of the PBPK model of CsA incorporating the time-dependent inhibition.
Saki Izumi (Eisai Co., Ltd., Japan)
- 14:05-14:30 Multiple parameter optimization of PBPK and QSP models using Cluster Gauss-Newton method.
Kota Toshimoto (Astellas Pharma Inc., Japan / RIKEN)
- 14:30-14:50 Coffee break
- 14:50-15:15 Prediction of unbound brain and CSF drug concentrations in animals and human -Theoretical and empirical approaches for species differences in P-gp and BCRP-
Hideki Hirabayashi (Takeda Pharmaceutical Company Limited, Japan)
- 15:15-15:40 Prediction of renal clearance and plasma pharmacokinetics of opioids using a microphysiological system.
Tomoki Imaoka (DAIICHI SANKYO COMPANY, LIMITED, Japan)
- 15:40-16:05 To what extent can the albumin-mediated transport mechanism bridge the gap of hepatic uptake parameters between in vitro and in vivo?
Seiji Miyauchi (Toho University, Japan / RIKEN)
- 16:05-16:30 Quantitative proteomics for transporters.
Sumio Ohtsuki (Kumamoto University, Japan / RIKEN)
- 16:30-16:55 Transporter-mediated drug disposition in non-injured organs in diseased condition.
Yukio Kato (Kanazawa University, Japan / RIKEN)
- 16:55-17:10 Closing remarks
Takashi Yoshikado (Yokohama University of Pharmacy, Japan / RIKEN)