

**The 23rd TMIMS International Symposium on
"New Frontiers in Ubiquitin Proteasome System"**

December 6 (Tue), 2022

Tokyo Metropolitan Institute of Medical Science

Tokyo Metropolitan Institute of Medical Science (TMIMS) holds a series of the "TMIMS International Symposium" on various subjects in medical and life science fields. The 23rd TMIMS International Symposium takes place as a satellite meeting of the "Ubiquitin New Frontier ~ from Neo-Biology to Targeted Protein Degradation ~" held on December 3-4 at Ito Hall, the University of Tokyo. First of all, we are very grateful to the invited speakers for attending consecutive conferences and visiting our institute. As ubiquitin research is expanding in all areas of life science and medical research, many researchers in TMIMS are very interested in the fundamental molecular mechanisms of ubiquitin proteasome system and ubiquitin-related disease such as cancer, diabetes, neurodegenerative disease, and neurodevelopmental disorders. In this symposium, prominent international scientists, TMIMS researchers, and young researchers from the nearby universities gather and present the latest findings and ideas on new molecular mechanisms of ubiquitin codes, proteasome, and developing therapeutics.

I would like to thank TMIMS and the Grant-in-Aid for Scientific Research in Innovative Areas "New frontiers for ubiquitin biology driven by chemo-technologies", for supporting this symposium.

I hope that all participants, including young scientists and graduate students, enjoy high-quality science and fruitful discussion!



Sincerely,

Yasushi Saeki, Ph.D.

Project Leader

Protein Metabolism Project

Tokyo Metropolitan Institute of Medical Science

E-mail: saeki-ys@igakuken.or.jp

General Information

Organizer

Yasushi Saeki (Tokyo Metropolitan Institute of Medical Science, Japan)

Sponsors

Tokyo Metropolitan Institute of Medical Science

Grant-in-Aid for Scientific Research on Innovative Areas "New frontier for ubiquitin biology driven by chemo-technologies" from MEXT, Japan

The Uehara Memorial Foundation

Infection prevention measures

Participants are asked to wear masks. Please refrain from coming to the meeting if you have any of the symptoms such as a fever of 37.5°C or higher, cough, sore throat, fatigue, or loss of taste or smell.

Registration

The registration desk will be open at the entrance hall from 9:00 a.m. on December 6.

Please pick up an abstract book and a name folder (please write your name).

Instructions for speakers

Presentations are expected to use his/her own laptop. The screen is optimized for 16:9 aspect (4:3 is also fine). Only HDMI connector is available. If your computer is not equipped with HDMI, please bring an appropriate converter. For the speakers and chairpersons, lunch (Kamameshi) and buffet-style dinner will be provided.

Venue

Auditorium, Tokyo Metropolitan Institute of Medical Science

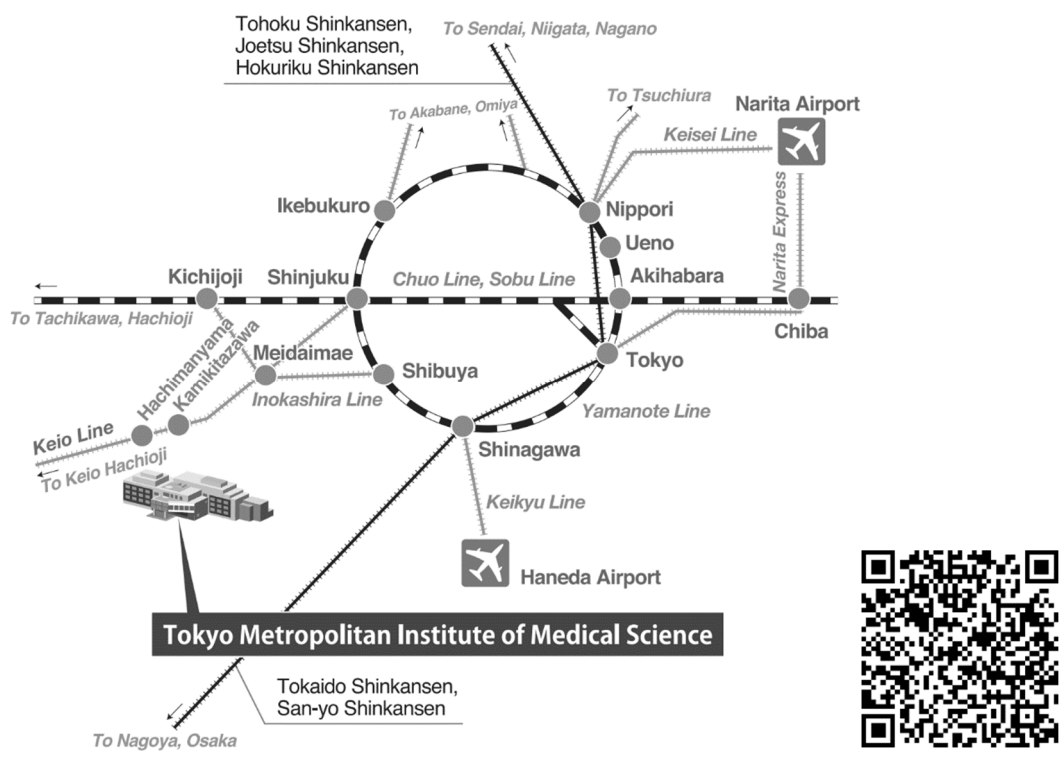
(Address: 2-1-6 Kamikitazawa, Setagaya-ku, Tokyo, 156-8506 Japan)



Access to TMIMS

~8-min walk from "Kamikitazawa" station of Keio-Line

Please note that ONLY local trains stop at "Kamikitazawa" station.



More information of TMIMS

Our institute aims to improve the medical treatment and welfare of citizens in Tokyo through comprehensive and integrative approaches to medical problems the big city is facing. We attempt to achieve the goals listed in the "Tokyo in Ten Years" plan which includes such projects as development of diagnostic methods for early detection and assessment of cancer, improvement of the health care measures for elderly people and patients with incurable diseases, and accelerated clinical application of research results. We will collaborate with municipal hospitals to develop new and better diagnostic methods and also new drugs and therapeutic strategies.



Director
Hisao Masai

Message from the Chairperson

Tokyo is the political, economic and cultural center of Japan. Developing Tokyo into a more healthy welfare state will therefore go a long way toward building a prosperous future for Japan. The mission of the Tokyo Metropolitan Institute of Medical Science (TMIMS) is to promote research in the life and medical sciences to improve the lives and health of the citizens of Tokyo. It is well known that Japan has the most rapidly aging society in the world. Tokyo, which reflects Japan itself, is undergoing a steady increase in cancers and infectious diseases, lifestyle-related illnesses, neural and mental disorders, and various other health problems. Naturally, curing all of these diseases is a common goal for all humankind, and considerable efforts have been made at the national level. However, it is also essential for the Tokyo Metropolitan Government to take the initiative in this endeavor. Tokyo has numerous problems unique to megacities. For instance, many people suffer from rare and intractable diseases that researchers often overlook. TMIMS has been actively working on these important problems, promptly and practically addressing health-related issues with the aim of protecting the health of all Tokyo citizens.



Keiji TANAKA



Program

- 9:00-10:00 Registration
- 10:00-10:10 Opening Remarks - Hisao Masai (The Director General of TMIMS)
- 10:10-11:50 Session 1 "Ubiquitin codes"**
Chair: Fumiaki Ohtake (Hoshi University)
- 10:10-10:35 David Komander (Ubiquitin Signalling Division, WEHI, Australia)
"Crossing Codes"
- 10:35-10:50 Jun-ichi Sakamaki (The University of Tokyo)
"Ubiquitination of phosphatidylethanolamine in organellar membranes"
- 10:50-11:05 Yukiko Yoshida (Protein Metabolism Project, TMIMS)
"Negative regulation of Nrf1 by noncanonical ubiquitination in NGLY1 deficiency"
- 11:05-11:20 Hiroyuki Sasanuma (Genome Project, TMIMS)
"A role of UBC13-dependent ubiquitin signaling in the repair of blocking adducts from DNA double-strand breaks"
- 11:20-11:35 Keijun Kakihara (Tokyo Institute of Technology)
"Cis-activity regulation of USP8 and STAMBPL1, two endosomal deubiquitinating enzymes, and role of dysregulation in disease onset"
- 11:35-11:50 Shoji Hata (Calpain Project, TMIMS)
"Identification of a novel ubiquitin-directed protease, CAPN15, as a regulator of E-cadherin"
- 11:50-13:00 Lunch
- 13:00-14:20 Session 2 "Proteasome structure and regulation"**
Chair: Jun Hamazaki (The University of Tokyo)
- 13:00-13:25 Eri Sakata (Göttingen University, Germany)
"Structural basis for regulation of the AAA+ ATPases in protein quality control"
- 13:25-13:40 Shoshiro Hirayama (The University of Tokyo)
"The ESCRT-I complex mediates proteasomal degradation via PTPN23"
- 13:40-14:05 Kylie Walters (National Cancer Institute, USA)
"Interactions and Targeting of Proteasome Substrate Receptors hRpn10 and hRpn13"
- 14:05-14:20 Akinori Endo (Protein Metabolism Project, TMIMS)
"Phase transition of ubiquitylated proteins triggered by ATP depletion"
- 14:20-14:40 Coffee Break
- 14:40-16:10 Session 3 "Protein quality control system"**
Chair: Koji Yamano (TMDU)
- 14:40-15:05 Claudio Joazeiro (ZMBH, Heidelberg University, Germany)
"Evolution of mechanisms for sensing and responding to ribosome stalling and collision"

- 15:05-15:30 Hiroyuki Kawahara (Tokyo Metropolitan University)
"Pre-emptive quality control machinery supports vesicular trafficking by ubiquitinating GDP-bound Rab-family small GTPases"
- 15:30-15:55 Hsueh-Chi Sherry Yen (Institute of Molecular Biology, Academia Sinica, Taiwan)
"C-degron pathways guard the fidelity of proteome"
- 15:55-16:10 Takuya Tomita (Protein Metabolism Project, TMIMS)
"A quality control system for maintaining protein complex integrity"
- 16:10-16:30 Coffee Break
- 16:30-17:50 Session 4 "Physiology, disease and drug development"**
 Chair: Yasushi Saeki (TMIMS)
- 16:30-16:55 Daniel Finley (Harvard Medical School, USA)
"Global remodeling of the proteome in terminal differentiation"
- 16:55-17:10 Genjiro Suzuki (Dementia Research Project, TMIMS)
" α -synuclein strains that cause distinct pathologies differentially inhibit proteasome"
- 17:10-17:25 Mari Suzuki (Diabetic Neuropathy Project, TMIMS)
"A Drosophila model of diabetic neuropathy reveals a crucial role of proteasome activity in the glia"
- 17:25-17:50 Alessio Ciulli (University of Dundee, UK)
"How PROTAC degraders work: design principles and drug development for challenging cancer targets"
- 17:50-18:00 Closing Remarks - Keiji Tanaka (The Board Chairperson of TMIMS)
- 18:00-20:00 Group Photo / Reception Party (Room 2BC)