

Institute for Environmental Sciences
International Symposium on
Environmental Dynamics of Radionuclides
and Biological Effects of Low Dose-Rate Radiation

September 27-29, 2021

Aomori, JAPAN

Virtual Meeting
PROGRAM

Day 1: September 27 (Mon)

OPENING CEREMONY

13:00-13:20 JST (7:00- EEST | 6:00- CEST | 23:00- (Sun, Sept 26) CDT)

Welcome Address

Yoshiya SHIMADA, President, IES

Greetings from the Sponsor

- Aomori Prefectural Government

Congratulatory Addresses

- Ministry of Education, Culture, Sports, Science and Technology Japan (MEXT)
- Rokkasho Village Government

ENVIRONMENTAL DYNAMICS of RADIONUCLIDES

Special Lecture 1 **13:20-13:50 JST (7:20- EEST | 6:20- CEST | 23:20- (Sun, Sept 26) CDT)**

Chair: Kimiaki SAITO (JAEA, Japan)

Tritium in the Environment

Noriyuki MOMOSHIMA

(Kyushu University, Professor Emeritus, and President of Kyushu Environmental
Evaluation Association, Japan)

Special Lecture 2 **13:50-14:20 JST (7:50- EEST | 6:50- CEST | 23:50- CDT)**

Chair: Takeshi IIMOTO (The University of Tokyo)

Fukushima ¹³⁷Cs Re-suspension: Biological Processes

Yasuhito IGARASHI

(Kyoto University, Japan)

Break **14:20-14:40 JST (8:20- EEST | 7:20- CEST | 0:20- (Mon, Sept 27) CDT)**

Session 1A Environmental Effects 1 14:40-15:40 JST (8:40- EEST | 7:40- CEST | 0:40- CDT)

Chair: Hiroaki TERADA (JAEA, Japan)

S1A-1 Long-Range Transport of Rn-222 in Eastern Asian and Deposition of Its Progenies in Japan

Hiromi YAMAZAWA (Nagoya University, Japan)

S1A-2 JAEA's Modeling Studies on Radionuclides Transport in the Terrestrial Environment

Masakazu OTA (JAEA, Japan)

S1A-3 10-year Oceanic Simulation of ¹³⁷Cs Derived from the Fukushima Dai-ichi Nuclear Power Plant Accident

Daisuke TSUMUNE (CRIEPI, Japan)

Break 15:40-16:00 JST (9:40- EEST | 8:40- CEST | 1:40- CDT)

Session 1B Environmental Effects 2 16:00-17:00 JST (10:00- EEST | 9:00- CEST | 2:00- CDT)

Chair: Yuichi ONDA (University of Tsukuba, Japan)

S1B-1 Derivation of Soil-to-Crop Transfer Factor of Carbon-14 by Using Stable Carbon Isotope Ratios

Keiko TAGAMI (QST, Japan)

S1B-2 Temporal Variation of Cs-134 and Cs-137 Radioactivity in Waters from Natsui and Same Rivers in South Fukushima Prefecture in Japan

Seiya NAGAO (Kanazawa University, Japan)

S1B-3 Research on the Environmental Effects of Radionuclides at IES - An Overview

Satoshi YOSHIDA (Department of Radioecology, IES, Japan)

Poster Exhibition / Viewing on website (No oral presentation)

Questions for Poster presenters will be accepted until 17:00 on September 28 (Tuesday).

Answers to Questions may be posted by the presenters until 12:00 on September 29

(Wednesday).

Day 2: September 28 (Tue)

BIOLOGICAL EFFECTS of LOW DOSE-RATE RADIATION

Special Lecture 3 **8:30-9:00 JST (2:30- EEST | 1:30- CEST | 18:30- (Mon, Sept 27) CDT)**

Chair: Jun'ichiro KOMURA (Department of Radiobiology, IES, Japan)

Effects of Low Dose and Low Dose Rate Radiation on Animals

Gayle WOLOSCHAK (Northwestern University, USA)

Special Lecture 4 **9:00-9:30 JST (3:00- EEST | 2:00- CEST | 19:00- CDT)**

Chair: Jun'ichiro KOMURA (Department of Radiobiology, IES, Japan)

Detection of Transgenerational Genetic Effects Based on Whole Genome Sequencing in the mouse model

Yoichi GONDO (Tokai University, Japan)

Break **9:30-9:40 JST (3:30- EEST | 2:30- CEST | 19:30- CDT)**

Special Lecture 5 **9:40-10:10 JST (3:40- EEST | 2:40- CEST | 19:40- CDT)**

Chair: Jun'ichiro KOMURA (Department of Radiobiology, IES)

Mechanisms of Radiation Action on Carcinogenesis: What Is Really Induced?

Nori NAKAMURA (RERF, Japan)

Break **10:10-10:20 JST (4:10- EEST | 3:10- CEST | 20:10- CDT)**

Session 2A Biological Effects **10:20-11:20 JST (4:20- EEST | 3:20- CEST | 20:20- CDT)**

Chair: Yutaka YAMADA (QST, Japan)

S2A-1 Intestinal Organoids for Studying Effects of Low-Dose/Low-Dose-Rate Radiation

Yuki FUJIMICHI (CRIEPI, Japan)

S2A-2 Dose-rate effect of rat mammary carcinogenesis

Tatsuhiko IMAOKA (QST, Japan)

S2A-3 Experimental Studies at the IES on the Biological Effects of Chronic Low Dose-Rate Radiation Exposure in Mice

Ignacia Braga TANAKA III (Department of Radiobiology, IES, Japan)

Poster Exhibition / Viewing on website (No oral presentation)

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Day 3: September 29 (Wed)

TRITIUM

Special Lecture 6 **8:30-9:00 JST (2:30- EEST | 1:30- CEST | 18:30- (Tue, Sept 28) CDT)**

Chair: Masakazu OTA (JAEA, Japan)

³H and ¹⁴C Behaviour in Wild Biota – An improved Metabolic Model

Anca MELINTESCU (IFIN-HH, Romania)

Special Lecture 7 **9:00-9:30 JST (3:00- EEST | 2:00- CEST | 19:00- CDT)**

Chair: Tsutomu SHIMURA (National Institute of Public Health, Japan)

Genotoxicity, Tumorigenicity and Lifespan Effects of Chronically Ingested Tritium in Mice *In Vivo*

Dmitry KLOKOV (IRSN, France)

Break **9:30-9:40 JST (3:30- EEST | 2:30- CEST | 19:30- CDT)**

Announcement of Best Poster Awardees **9:30- JST [3:30- EEST | 2:30- CEST | 19:30- CDT])**

Session 3A Environmental Dynamics of Tritium

9:40-10:20 JST (3:40- EEST | 2:40- CEST | 19:40- CDT)

Chair: Tomoyuki TAKAHASHI (Kyoto University, Japan)

S3A-1 Tritium Transfer into the Environment

Sumi YOKOYAMA (Fujita Health University, Japan)

S3A-2 Tritium Concentration in Monthly Precipitation near the Fusion Test Facility during the Deuterium Plasma Experiment

Naofumi AKATA (Hirosaki University, Japan)

Break **10:20-10:30 JST (4:20- EEST | 3:20- CEST | 20:20- CDT)**

Session 3B Biological Effects of Tritium

10:30-11:30 JST (4:30- EEST | 3:30- CEST | 20:30- CDT)

Chair: Tetsuya ONO (Former President of IES, Japan)

S3B-1 Analysis of Dose and Dose-Rate Dependence of Radiation-Type Mutation Induced by Tritiated Water: An Approach Using a Hyper-Sensitive Cell System

Hiroshi TAUCHI (Ibaraki University, Japan)

S3B-2 A Study of the Biological Effects of Tritium in Mice

Toshiyuki UMATA

(University of Occupational and Environmental Health, Japan)

S3B-3 Cellular Response by Long-Term Tritium Exposure in Normal Human Epithelial Cell

Masatoshi SUZUKI (Tohoku University, Japan)

Break 11:30-11:40 JST (5:30- EEST | 4:30- CEST | 21:30- CDT)

Poster Exhibition / Viewing on website (No oral presentation)

Questions for Poster presenters will be accepted until 17:00 on September 28 (Tuesday).

Answers to Questions may be posted by the presenters until 12:00 on September 29

(Wednesday).

Panel Discussion on “Communication” (in Japanese only)

11:40-12:50 JST (5:40- EEST | 4:40- CEST | 21:40- CDT)

Moderator: Wako TOHJIMA (Science journalist, Japan)

Panelists:

Noboru TAKAMURA (Nagasaki University, Japan)

Michiaki KAI (Nippon Bunri University, Japan)

Noriko USAMI (KEK-IMSS-PF, Japan)

Sumi YOKOYAMA (Fujita Health University, Japan)

Hiroshi TAUCHI (Ibaraki University, Japan)

Yoshiya SHIMADA (President of IES, Japan)

Awarding Ceremony for Best Posters 12:50-13:00 JST (6:50- EEST | 5:50- CEST | 22:50- CDT)

Closing Remarks (in Japanese) 13:00-13:10 JST (7:00- EEST | 6:00- CEST | 23:00- CDT)

Sotaro ITO (Senior Executive Director, IES)