

# The 24<sup>th</sup> Hiroshima International Symposium

## "Research on radiation and its effects in Kazakhstan and other countries"

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Environmental Radioactivity Research Network Center (F-21-14)).  
Co-hosted with The Center for Peace, Hiroshima University,  
Also, Supported by the Embassy of Japan in the Republic of Kazakhstan.

**Period: March 18 - 19, 2022**  
(Online with Zoom)

Masaharu Hoshi, Noriyuki Kawano (Hiroshima University) *Organizers*

Time schedule of the meeting: UTC: 07:00-14:00,

France: UTC+1: 08:00-15:00, Germany: UTC+1: 08:00-15:00, Moscow: UTC+3: 10:00-17:00, Semey: UTC+6: 13:00-20:00,

Japan: UTC+9: 16:00-23:00, Washington DC: UTC-4: 03:00-10:00, San Diego UTC-7: 00:00-07:00

### Program: The timetable below is in Japan

#### **March 18, Session 1:** (16:00 – 17:05)

Chairperson: Megu Ohtaki

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- 1) 16:00 – 16:05 Opening address: Altay Dyussupov (Rector, Semey Medical University, Kazakhstan)
- 2) 16:05 – 16:35 Kazbek Apsalikov (Scientific Medical Association Semey city, Kazakhstan): 65 years of radiation studies around the Semipalatinsk nuclear test site: realities and perspectives.
- 3) 16:35 – 17:05 Masaharu Hoshi (Hiroshima University, Japan): Overview of our studies of radiation effects in Kazakhstan

#### **March 18, Session 2:** (17:05 – 18:55)

Chairperson: Aya Sakaguchi

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- 4) 17:05 – 17:25 Aya Sakaguchi (University of Tsukuba, Japan): Preliminary efforts to ensure a safe-environments in areas surrounding uranium mines in Kazakhstan-Introduction of the aXis, JST Project.
- 5) 17:25 – 17:55 Sergazy Dyusseмбаев, Zhaksylyk Serikov, Alexey Klivenko (Shakarim University, Kazakhstan): The quality of meat of farm animals in the conditions of the STS (Semipalatinsk test site).
- 6) 17:55 – 18:25 Meirat Bakhtin, Danara Ibrayeva, Moldir Aumalikova, Yerlan Kashkinbaev, Aisulu Khazipova, Polat Kazymbet (Astana Medical University, Kazakhstan): Assessment of the radon safety of settlements located near the storage of radioactive waste.
- 7) 18:25 – 18:55 Kassym Zhumadilov<sup>1</sup>, Aidana Zhumalina<sup>1</sup>, Yernaz Sambayev<sup>1</sup>, Yeldos Bekzhanov<sup>1</sup>, Asel Bagramova<sup>1</sup>, Tulegen Kusainov<sup>2</sup>, Aya Sakaguchi<sup>3</sup>, Satoru Endo<sup>4</sup>, Shin Toyoda<sup>5</sup>, Hitoshi Sato<sup>6</sup>, Masaharu Hoshi<sup>4</sup> (L.N. Gumilyov Eurasian National University, Kazakhstan, <sup>2</sup>“Stomatolog” Ltd., Stepnogorsk, Kazakhstan, <sup>3</sup>University of Tsukuba, Japan, <sup>4</sup>Hiroshima University, Japan, <sup>5</sup>Okayama University of Science, Japan, <sup>6</sup>Ibaraki Prefectural University of Health Sciences, Japan): Study of <sup>7</sup>Be and <sup>210</sup>Pb in atmosphere of Akmola region of Kazakhstan.

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Coffee Break (18:55 – 19:05)

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**March 18, Session 3:** (19:05 – 20:35)

Chairperson: Evgenia Ostroumova

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- 8) 19:05 – 19:35 Talgat Muldagaliev, Aleksandra Lipikhina, Yulia Brait, Faina Konovalova, Merey Dzhambaev, Almagul Mansarina, Kazbek Apsalikov (The Institute of Radiation Medicine and Ecology, Semey Medical University, Kazakhstan): Socio-demographic consequences of SNTS activities at the present stage.
  - 9) 19:35 – 20:05 Steve Simon (National Cancer Institute, USA): The NCI Trinity Health Risk Study (study of 1st nuclear detonation in history).
  - 10) 20:05 – 20:35 Evgenia Ostroumova<sup>1</sup>, Bernd Grosche<sup>2</sup> (IARC/WHO, France, <sup>2</sup>Retired, formerly Federal Office for Radiation Protection, Germany): Radiation-related health risk studies on population around SNTS: Background and future steps.
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Coffee Break (20:35 – 20:45)

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**March 18, Session 4:** (20:45 – 22:15)

Chairperson: Masaharu Hoshi

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- 11) 20:45 – 21:15 Kassym Zhumadilov<sup>1</sup>, Alexander Ivannikov<sup>2</sup>, Valeriy Stepanenko<sup>2</sup>, Polat Kazymbet<sup>3</sup>, Shin Toyoda<sup>4</sup>, Masaharu Hoshi<sup>5</sup> (<sup>1</sup>L.N. Gumilyov Eurasian National University, Kazakhstan, <sup>2</sup>National Medical Research Radiological Center of the Ministry of Health of the Russian Federation, Russia, <sup>3</sup>Institute of Radiobiology and Radiation Protection, NJSC “Astana Medical University”, Kazakhstan, <sup>4</sup>Okayama University of Science, Japan, <sup>5</sup>Hiroshima University, Japan): ESR dosimetry study of victims of the Hiroshima atomic bombing: study of potential.
  - 12) 21:15 – 21:45 Stephen D. Egbert (Consultant, San Diego, USA): Spatial profiles of neutron and gamma doses for a Japanese wooden house on its lot, and neutron capture and activation in walls, floors, roof and soil.
  - 13) 21:45 – 22:15 Yoshihiro Noso<sup>1</sup>, Atsuko Imagawa<sup>2</sup>, Akio Haruta<sup>3</sup>, Motomi Ushiyama<sup>4</sup>, Takashi Sawada<sup>5</sup>, Laura Pak<sup>6</sup>, Nailya Chaizhunussova<sup>7</sup>, Ken Inoue<sup>8</sup>, Nobuo Takeichi<sup>9</sup>, Masaharu Hoshi<sup>10</sup> (<sup>1</sup>Hiroshima International University, Hiroshima, Japan, <sup>2</sup>Abiko Clinic, Chiba, Japan, <sup>3</sup>Yokosuka Central Clinic, Kanagawa, Japan, <sup>4</sup>Sagami Seikyo Hospital, Kanagawa, Japan, <sup>5</sup>Minatomachi Clinic, Yokohama, Japan, <sup>6</sup>Oncology Centers Semey Medical University, Semey, Kazakhstan, <sup>7</sup>Semey Medical University, Semey, Kazakhstan, <sup>8</sup>Kochi University, Kochi, Japan, <sup>9</sup>Takeichi Clinic, Hiroshima, Japan, <sup>10</sup>Hiroshima University, Hiroshima, Japan): Trial of remote thyroid examination 10 years after the Fukushima nuclear power accident in COVID-19 pandemic.
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Discussion (22:15 – 22:30)

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**March 19, Session 5:** (16:00–17:00)

Chairperson: Masaharu Hoshi

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- 14) 16:00–16:30 Madina Apbassova<sup>1</sup>, Nailya Chaizhunussova<sup>1</sup>, Dariya Shabdarbayeva<sup>1</sup>, Ken Inoue<sup>2</sup> (<sup>1</sup>Semey Medical University, <sup>2</sup>Kochi University, Japan): Suicide mortality in Semey region from 2014 till 2018 and 2019–2021.
- 15) 16:30–17:00 Ken Inoue<sup>1</sup>, Noriyuki Kawano<sup>2</sup>, Nailya Chaizhunussova<sup>3</sup>, Nursultan Seksenbayev<sup>3</sup>, Madina Apbassova<sup>3</sup>, Nobuo Takeichi<sup>4</sup>, Yoshihiro Noso<sup>5</sup>, Masaharu Hoshi<sup>2</sup> (<sup>1</sup>Kochi University, Japan, <sup>2</sup>Hiroshima University, Japan, <sup>3</sup>Semey Medical University, Kazakhstan, <sup>4</sup>Takeichi Clinic, Japan, <sup>5</sup>Hiroshima International University, Japan): Anxiety and fear about mental and physical health for radiation exposure in the people -importance of dissemination about correct knowledge based on the cooperation in various fields-.
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Coffee Break (17:00–17:10)

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**March 19, Session 6:** (17:10–17:50)

Chairperson: Kassym Zhumadilov

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- 16) 17:10–17:20 Zhaxybay Zhumadilov (Nazarbayev University, Kazakhstan): Ionizing radiation exposure and the gut microbiome.
- 17) 17:20–17:50 Almagul Kushugulova (Nazarbayev University, Kazakhstan): The perspectives of pharmabiotic using to prevent Health Effects of Internal Exposure to Radioactive Microparticles.
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Coffee Break (17:50–18:00)

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**March 19, Session 7:** (18:00–19:30)

Chairperson: Nailya Chaizhunussova

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- 18) 18:00–18:30 Nariaki Fujimoto (Hiroshima University, Japan): Our animal experiments of <sup>56</sup>MnO<sub>2</sub> in 2018 and 2019.
- 19) 18:30–19:00 Keiko Otani<sup>1</sup>, Megu Ohtaki<sup>1</sup>, Nariaki Fujimoto<sup>1</sup>, Darkhan Uzbekov<sup>2</sup>, Ynkar Kairkhanova<sup>2</sup>, Aisulu Saimova<sup>2</sup>, Nailya Chaizhunussova<sup>2</sup>, Dariya Habdarbaeva<sup>2</sup>, Almas Azhimkhanov<sup>3</sup>, Kassym Zhumadilov<sup>4</sup>, Valeriy Stepanenko<sup>5</sup>, Masaharu Hoshi<sup>1</sup> (<sup>1</sup>Hiroshima University, Japan, <sup>2</sup>Semey Medical University, Kazakhstan, <sup>3</sup>National Nuclear Center, Kazakhstan, <sup>4</sup>Eurasian National University <sup>5</sup>MRRC Obninsk, Russia): Effects of internal exposure to neutron-activated <sup>56</sup>MnO<sub>2</sub> powder on locomotor activity in rats.
- 20) 19:00–19:30 Kazuko Shichijo, Tishihiko Takatsuji (Nagasaki University, Japan): Pathological effects in relation to dose level after acute intake of neutron-activated <sup>56</sup>Mn dioxide powder in Wistar rats.

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Coffee Break (19:30–19:40)

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**March 19, Session 8:** (19:40–21:10)

Chairperson: Nariaki Fujimoto

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- 21) 19:40–20:10 Bakhyt Ruslanova<sup>1</sup>, Nailya Chaizhunussova<sup>1</sup>, Dariya Shabdarbayeva<sup>1</sup>, Nariaki Fujimoto<sup>2</sup>, Masaharu Hoshi<sup>2</sup> (<sup>1</sup>Semey Medical University, Kazakhstan, <sup>2</sup>Hiroshima University, Japan): The effect of various doses of ionizing radiation on liver tissue in experiment.
- 22) 20:10–20:40 Zhaslan Abishev<sup>1</sup>, Nailya Chaizhunussova<sup>1</sup>, Dariya Shabdarbayeva<sup>1</sup>, Nariaki Fujimoto<sup>2</sup>, Masaharu Hoshi<sup>2</sup> (<sup>1</sup>Semey Medical University, Kazakhstan, <sup>2</sup>Hiroshima University, Japan): The effects of internal and external exposure on morphological indicators and gene expression in lungs in experiment (rats and mice).
- 23) 20:40–21:10 Nailya Chaizhunussova<sup>1</sup>, Gauhar Amantayeva<sup>1</sup>, Dariya Shabdarbayeva<sup>1</sup>, Nariaki Fujimoto<sup>2</sup>, Masaharu Hoshi<sup>2</sup> (<sup>1</sup>Semey Medical University, Kazakhstan, <sup>2</sup>Hiroshima University, Japan): Influence of internal and external ionizing radiation on gene expression of the reproductive system in male laboratory animals.
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Discussion: (21:10–21:25)

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- 25) 21:25–21:30 Closing Remarks: Masaharu Hoshi (Hiroshima University, Japan)