## **Preface**

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This special issue of Radiation Protection Dosimetry constitutes the proceedings of International Symposium on Natural and Artificial Radiation Exposures and Radiological Protection Studies (NARE2023), jointly organized by Hirosaki University and Institute for Environmental Sciences. The symposium was held at Hirosaki University 50th Anniversary Auditorium from 19 to 22 September, 2023. The organization of this symposium was sponsored by 14 related companies.

Hirosaki University and the Institute for Environmental Sciences, as core facilities in Japan, are responsible for promoting research and developing human resources in radiological sciences. They have promoted research on natural radiation and biological effects, as well as the environmental and biological impact of the artificial radionuclides resulting from the Fukushima Daiichi Nuclear Power Plant accident. On the other hand, the use of nuclear energy is expected to expand due to the increasing demand for energy and the need to secure stable energy sources. Many nuclear facilities are located around the world, and studies on the impacts of nuclear power under normal operation have been conducted. However, as a result of the global COVID-19 outbreak, which has restricted collaborative research and personnel exchange, the challenge is how to share the latest knowledge on radiation protection with the community for the safe use of radiation.

Therefore, we have decided to organize the "International Symposium on Natural and Artificial Radiation Exposures and Radiological Protection Studies (NARE2023)" face-to-face in Hirosaki, Japan. This symposium covered a variety of radiation research fields focused on radiation exposures and radiological protection studies such as 'epidemiology', 'dosimetry', 'high background radiation area', 'medical and occupational exposure', 'natural and artificial radioactivity', 'NORM/TENORM', 'radiation biology', 'radiation measurement', 'radiation protection', 'radioactive tracer' and 'risk communication'.

A total of 161 scientists from 13 countries in Asia, Africa, and Europe participated in this symposium. The symposium featured 1 keynote lecture, 6 invited talks by internationally renowned researchers, 32 oral presentations, and 114 poster presentations.

This special issue contains 71 peer-reviewed research papers selected from the contributions presented at the symposium. Some work-in-progress presentations were not included but are expected to develop into independent publications in the future.

The organizers sincerely hope that NARE2023 provided a valuable platform for researchers to establish direct connections and foster future collaborations in the fields of natural and artificial radiation exposure, as well as radiological protection studies.

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1494 Tokonami et al.

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