



REMPAN eNEWSLETTER

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SPECIAL EDITORIAL

Invitation by KIRAMS to the 17th WHO REMPAN Coordination Meeting to be held in Seoul on 13-15 September 2023!

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To read WHO EURO Ukraine crisis strategic response plan for Jun - Dec 2022 - [click here](#)

From the desk of REMPAN Coordinator:

Dear Reader,

I hope you had a great summer and are back to work full of energy and ready to concur new heights!

Today's eNewsletter is featuring the upcoming REMPAN meeting invitation by the hosting institution – WHO Collaborating Center, Korean Institute for Radiological Medical Sciences in Seoul (Republic of Korea).

I would like to express my gratitude for their support of the WHO and of the REMPAN network, going back to more than a decade.

Thanks to all the contributors to this newsletter for your continuing support and cooperation.

Thank you for being REMPAN!

Dr Zhanat Carr

Dear REMPAN Colleagues,

The 17th REMPAN meeting will be held in Seoul, Korea from September 13th to 15th, 2023. In the post-COVID-19 pandemic era, this meeting will be conducted in a hybrid format, combining in-person and virtual components. Experts in radiation protection and radiation emergency medical response from around the world will convene to present their countries' experiences, research findings, and other related topics. Participants will have the opportunity to visit the Korea Institute of Radiological and Medical Sciences (KIRAMS), which celebrates its 60th anniversary in 2023. Established in 1963 as the Research Institute of Radiological & Medical Sciences, KIRAMS is a government-funded research institute dedicated to the medical application of radiation. Operating the Korea Cancer Center Hospital, the Research Institute of Radiological & Medical Sciences, the National Radiation Emergency Medical Center (NREMC), and the Korea Radio-Isotope Center for Pharmaceuticals, it has been at the forefront of advancing radiological medicine in Korea.

Through the utilization of radiation and radioactive isotopes, KIRAMS has taken on a crucial role in conducting research and developing treatment methods for challenging diseases, including cancer. It goes beyond patient

care to actively contribute to securing technological competitiveness and fostering the growth of the industry in related fields. NREMC, established in 2002 to prepare for and respond to radiation disasters, is actively enhancing its emergency medical response capabilities.

Through the training and education of 909 designated personnel for radiation emergencies from 31 Radiological Emergency Medical Institutions, as well as through international cooperation, it is strengthening its ability to respond to emergencies involving radiation incidents. ◆



Dr. Jinkyung Lee - President of the KIRAMS



Dr. Wonil Jang - Director General of the NREMC

News from Ukraine

◆ Updates from the WHO Collaborating Center - National Research Center for Radiation Medicine of the National Academy of Medical Sciences of Ukraine (NRCRM) of the National Academy of Medical Sciences (NAMS) of Ukraine

By Anatolii Chumak, Director of the Institute of Clinical Radiology of NRCRM / NAMS

In the first six months of 2023, NRCRM continued its efforts towards the nation's response to the Russian invasion. Facing the threat of radiological and nuclear emergencies, NRCRM has supported the work of WHO to strengthen national capacity of the health sector. Two training courses were organized for the medical personnel and public health specialists of Rivne and Khmelnytsky regions of Ukraine – the regions hosting nuclear installations in February and March 2023. The trainings focused on pre-hospital response, including triage, decontamination, monitoring and management of persons over-exposed to radiation. Similar trainings were held in Zaporizhzhia and Dnipro regions for health workers of the most vulnerable regions.



In addition, Dr. V. Vasylenko, head of the Whole Body Counter dosimetry provided technical support to the WHO Country Office in Ukraine with regard to procurement of radiation monitoring equipment and the development of the list of technical specifications for such equipment. This report has enabled the procurement of the required equipment for emergency medical services, hospital ERs, and the laboratories of radiological monitoring belonging to the regional centres of disease control of the regional departments of health.

On 26 April, NCRMC held a webinar for the 37th annual commemoration of the Chernobyl accident and summarized the research and medical follow-up efforts of the Center towards mitigation of health consequences of the disaster.



The Director General of NCRMC, Prof. D. Bazyka took part in the ConRad-2003 conference held on May 9-11 in Munich, Germany, where he reported on the current situation in Ukraine related to

radiological and nuclear hazards and the efforts of the Center towards strengthening national preparedness to such emergencies (photo 2).



NRCRM staff continued providing humanitarian support to the national forces at the front lines and received in return the flag from battle fields signed with the words of gratitude (photo 3).

◆ WHO Support to Ukraine

WHO continues its support to Ukraine on preparedness to health emergencies related to technological hazards. Technical assistance to the Ministry of Health (MoH) of Ukraine as well the neighboring countries via following activities:

- procurement of medical supplies and radiation monitoring and measuring devices for emergency medical services in Ukraine and Moldova;

- live training courses were held for strengthening health sector's capacities on preparedness to radiation emergencies in Rivne and Khmelnytsky regions in February and March 2023.

- public communication, as well as information and technical tools for specialists involved in planning the response to radiological and nuclear emergencies available on a dedicated website.

- Support to the health sector in countries bordering with Ukraine and hosting the refugees, to support their health sector's preparedness to radiation emergencies.

Updates on WHO's response to the war in Ukraine and Situation Reports are provided at:

<https://www.who.int/emergencies/situations/ukraine-emergency>

News from the Network Members

◆ Public Lecture on Medical System Required in the Event of a Radiation Disaster was held in Hiroshima, Japan

By Kazunori Kodama, Executive Director, Radiation Effects Research Foundation

On 11 February 2023, HICARE (Hiroshima International Council for Health Care of the Radiation-Exposed) held a public lecture for the purpose of providing the knowledge on “medical system required in the event of a radiation disaster”. Venue of the public lecture was International Conference Center Hiroshima and 138 people participated.



Dr. Kazunori Kodama (photo on the left) gave a talk entitled “Radiation Disaster Medical System in the World - WHO REMPAN and Hiroshima”. He outlined about the role of the WHO’s REMPAN, as well as how Hiroshima has been involved in it, dividing it into two phases before and after the establishment of HICARE in 1991.

Dr. Nobuyuki Hirohashi, Professor of Hiroshima University Research Institute for Radiation Biology and Medicine, gave a talk entitled “Preparing for the Coming Radiation Disaster

- Current Status and Issues of Disaster Medical System”. He introduced the situation in the medical practice immediately after the Great East Japan Earthquake and the accident of Fukushima Daiichi Nuclear Power Plant. Then he outlined the current status and issues in the ongoing development of the nuclear disaster medical system, as well as the role of Hiroshima University. ◆

◆ More news from RERF:



Prof Kenji Kamiya – [New Chair of the Radiation Research Foundation](#), WHO Collaborating Center (Hiroshima, Japan) Former Director of the Research Institute for Radiation Biology and Medicine (RIRBM) at Hiroshima University, Prof. Kamiya held a position of Vice-President of the Fukushima Medical University, prior to joining RERF Management team.

A long-term member of REMPAN, we wish him all the best

in his new role. ◆



Dr Preetha Rajaraman obtained a PhD in epidemiology from the Johns Hopkins SPH, followed by a postdoc fellowship at the Radiation Epidemiology Branch of the National Cancer Institute (NCI/NIH), where she was subsequently tenured. Since 2011, Dr. Rajaraman lead the South Asian branch of the NCI’s Center for Global Health. In June 2023, Preetha became a Vice-Chair and Executive Director of the RERF.

Congratulations! ◆

New Faces



A REMPAN focal point in the Kingdom of Saudi Arabia - **Dr. Musaed Almalki**, who is currently working as Director General of Radiation Protection program at the Ministry of Health in Saudi Arabia. He is a health physics and

radiation protection expert with more than 30 years of experience. In addition to radiation protection, his expertise also include healthcare administration, risk management, preparedness and response to radiological and nuclear emergencies.

Dr. Almalki holds a PhD degree from Canterbury University in New Zealand since 2009.

Welcome to REMPAN Family and see you in Seoul!



New REMPAN focal point in Philippines – Mr Francis Raize Nicholas Bautista – RN Health Programme Manager at the Health Emergency Management Bureau / Response Division / Department of Health of Republic of Philippines. He has 14 yr of experience in Disaster Risk Reduction and Management (DRRM) and is a member of the Anti-Terrorism Council and other national technical working groups developing policies, plans, and legislative bills. He represented the country in various ASEAN activities in relations to DRRM and Chemical, Biological, Radiological, and Nuclear (CBRN) Management. Today, Raize is responsible for the development of the Action Plan for the CBRN Consequence Management as part of the National Disaster Response Plan, provides technical inputs to RADPLAN, Contingency Plans against RN incidents, and capacity building for the health sector’s response through the Whole-of-Government Approach.

News from the Network Members

◆ The 25th Conference on Radiation Topics - ConRad 2023

By Prof. Matthias Port - Director of The Institute of Radiobiology of the German Armed Forces



The 25th Nuclear Medical Defense Conference, "*Global Conference on Radiation Topics - Preparedness, Response, Protection, and Research*" (ConRad), took place from May 08th to 11th, 2023 in Munich, hosted by the Bundeswehr Institute of RadioBiology (BIRB) affiliated to the University of Ulm. This year's "ConRad" celebrated the 25th anniversary and was finally in person after the pandemic period.

A total of 244 scientists from 27 nations attended the conference which provided a forum for the global radiation biomedical sciences community to engage in scientific exchange.

Consequent to the current political situation due to the war against Ukraine declared by Russia, radio-nuclear emergency scenarios have become a real threat to our society. In the conference key session "Medical impacts of the use of nuclear weapons and countermeasures" the top-class speakers (including representatives of the WHO and radiation researchers from Kiev, Ukraine) discussed various aspects of such scenarios

Continued:

In addition to the effects of nuclear weapons with regard to the current threat situation, possible medical countermeasures were discussed as well.

In the second key session, "Internal radiation by radionuclides of emergencies and therapies", WHO representative introduced the new policy for development of national stockpiles of medical countermeasures. During lectures, poster presentations, and satellite meetings, the international experts exchanged multidisciplinary information on the latest findings and developments in radiation biology and medical countermeasures. Among other research fields, new strategies in the diagnosis and drug treatment of acute radiation sickness and the management of large-scale radio nuclear events were presented.

The host of ConRad 2023, BIRB is a radiological research department of the German Armed Forces and provides important contribution to the medical countermeasures both in research and academic fields. In case of emergency, the research institute supports civilian, governmental, and inter-governmental bodies, such as the WHO, in managing response to such emergencies. The mobile medical RN Incident Investigation Team (MRIIT), as part of the Medical CBRN Protection Task Force, is available 24/7 to assist in investigating, sampling, and consulting on radiation casualties management.



News from WHO Radiation Programme

- On 27 Jan, WHO updated its list of medicines that should be stockpiled for radiological and nuclear emergencies, along with policy advice for their appropriate management. These stockpiles include medicines that either prevent or reduce exposure to radiation, or treat injuries once exposure has occurred.
- “In radiation emergencies, people may be exposed to radiation at doses ranging from negligible to life-threatening. Governments need to make treatments available for those in need – fast,” said Dr Maria Neira, WHO Assistant Director-General a.i, Healthier Populations Division. “It is essential that governments are prepared to protect the health of populations and respond immediately to emergencies. This includes having ready supplies of lifesaving medicines that will reduce risks and treat injuries from radiation.”
- More information, the link to the document and to the video of the launch webinar are found here: <https://www.who.int/news/item/27-01-2023-who-updates-critical-medicines-list-for-radiation-and-nuclear-emergencies>
- REMPAN Secretariat expresses its gratitude to all contributors, reviewers, editors, observers and the entire expert community that made this important document a reality – TANK YOU!
- As of 01 September, 2023, the document has been downloaded about 30 000 times. The document is being currently translated to Ukrainian language with the help of REMPAN members.



Selected activities in 2023:

- We continued supporting WHO response to the crisis in Ukraine, coordinating with partners, providing technical support to the WHO Country Office in Ukraine and neighbor countries; responding to the needs of the national health authorities in Ukraine and the neighbouring countries; providing recommendations on the safety and wellbeing of UN staff in Ukraine.
- Contributed to the Joint External Evaluation Mission to Kyrgyzstan in June 2023.
- WHO completed the following Joint External Evaluation (JEE) missions in the first half of 2023: Sierra Leone (27 Feb – 03 Mar), Azerbaijan (1-5 May), Pakistan (15 – 24 May), Guinea (May 22 – 26), Yemen Aden (May 28 – June 1), Syria (June 4 – 8), and Kyrgyzstan. The JEE mission are conducted to identify the areas of a country’s strength and weaknesses in the area of health security and apply to all types of emergencies, including radiation emergencies.
- WHO is contributing to development of the [ICRP-TG 120 report on Radiological Protection for Radiation Emergencies and Malicious Events](#).
- WHO’s new guidelines development project on internal Contamination Assessment and Management (iCAM) was launched on 21 July through the Scoping meeting that was held on line. Guidelines Development Group and Topical Expert Group have discussed the existing recommendations and gaps in knowledge, where recommendations are needed. The participants have identified the scope of the new guideline, agreed on methods of work, and the timeline for the project. The 2nd iCAM project meeting will take place in Seoul on 12 September.

News from the Network Members

◆ Updates from the Institute of Radiation Emergency Medicine at Hirosaki University (IREM), JAPAN

*By C. Kranrod, Dr A. Anderson, S. Tokonami
Institute of Radiation Emergency Medicine, Hirosaki University,
Japan*

IREM continues to actively train individuals in radiological protection and conduct research on reassessing radon health risks, enhancing cytogenetic biodosimetry, and developing diverse analytical methods for internal exposure. With the Japanese government lifting most restrictions and residents returning to the cities following the Fukushima Dai-ichi Nuclear Power Plant accident in 2011, the persistent fear of radiation remains in the community. The fear is often further exacerbated by the dissemination of false news reports that exaggerate the associated risks. Recognizing the crucial importance of effective radiological risk communication, IREM has placed significant emphasis on this aspect and is currently leading two substantial projects sponsored by the Ministry of Environment and the Fukushima Innovation Coast Organization. These initiatives aim to engage with the public in Fukushima by providing accurate information and alleviating the fear surrounding radiation.

- (1) The Ministry of the Environment in Japan and IREM conducted a dose survey in Fukushima Prefecture to assess radiation doses from natural and artificial radionuclides, particularly in areas where residents have returned. IREM also implemented an educational program on environmental radiation monitoring using Fukushima as a field, while also providing on-site consultation services to address community concerns about radiation. Furthermore, IREM is actively working on human resource development through educational programs and public lectures on environmental radiation monitoring.
- (2) IREM, acknowledging that the fear of radiation often prevents outdoor activities for children, launched the "Biodiversity Assessment Hands-on Learning Programme" aimed at elementary and junior high school students in cities with returning residents. This program offered outdoor activities, ecosystem exploration, and insect collection, allowing children to reconnect with nature. By fostering a deeper comprehension of radiation and its effects, the program sought to address the repercussions of radiation fears, promote environmental restoration, and contribute to the regeneration of the town.



Coming... Going....

◆ Change of management at the Armed-Forces Radiobiology Research Institute (AFRRI)

By M. Naeem

In July 2023, US Army Colonel Mohammad Naeem, MD, FACR relinquished the directorship of AFRRI to US Navy Captain Gerald Burke.



COL (Dr.) Naeem (2020-2023) re-operationalized, in record 16 months, DOD's only nuclear research reactor after 6 years of shutdown, catapulted R&D and operations contribute to winning a future nuclear ground war, protecting against Blackout warfare from an orbital EMP attack, protecting astronauts from cosmic radiation on future missions to moon and Mars, improving nuclear survivability in the arctic, and maintained 3 globally deployable medical rad-nukes response teams.



New AFRRI Director, CAPT Burke previously served as the Deputy Director of AFRRI. His expertise and significant experience at AFRRI and across the radiation sciences community throughout the course of his 32-yr Navy career position him well to lead the critical AFRRI mission into the future.

Updates from AFRRI's work will be presented at the 17th REMPAN meeting by Dr Susan Whiteway, Deputy Director of AFRRI.



News from the Network Members

◆ Moldova: a training course (TC) on Strengthening Capacities in Preparedness and Response to Radiation and Chemical Emergencies on June 19-21 2023 in Chisinau

By S. Gheroghita, WHO Moldova Country Office, I. Apostol (ANSP)

A national TC Strengthening Capacities in Preparedness and Response to Radiation and Chemical Emergencies was held for 22 public health specialists of Moldova with the technical support of the World Health Organization and the Swiss Agency for Development and Cooperation (SDC).



The SDC has recently provide a grant for procurement of the radiation monitoring equipment and delivered it to the National Agency for Public Health (ANSP), including radiation detection and measuring devices, individual dosimeters, as well as personal protective equipment in case of

exposure to chemical and radiological hazards. Dr. Stela Gheorghita (WHO) mentioned "The training of specialists as well as the updating of operational procedures is a part of the health system preparedness and response to public health emergencies, including in the framework of management of the situation associated with the

increasing number of refugees from Ukraine, coordinated by WHO". Specialists from ANSP's national and regional laboratories were familiarized with international standards and requirements for response to nuclear and radiological emergencies, reviewed the national legal framework in the field of radiation protection and radiological emergencies, preparedness and learned about response to public health emergencies by rapid response teams. Dr Zhanat Carr (WHO) presented the WHO's role and actions in providing support to WHO member countries on radiological and nuclear emergency preparedness worldwide. TC participants tested measuring equipment, practiced donning the PPE, and discussed the actions of emergency response teams. The TC was organized in the framework of the EU4MDA project to enhance public health emergency management capacities in Moldova.



◆ Regional Training Course (TC) on Radiation Protection and Safety and Accident Prevention in Radiotherapy.

By Dr. Andrey Bushmanov – First Deputy Director of SRC-FMBC, Director of SRC – FMBC WHO CC.

Regional TC was held at the State Research Center - Burnasyan Federal Medical Biophysical Center of Federal Medical Biological Agency in the framework of the IAEA Technical Cooperation Program (Project PER6036) and the IAEA Program for Cancer Treatment (PACT), Nov 14-18, 2022.

First Deputy Director of SRC-FMBC, Director of WHO REMPAN Collaborating Center, Prof. A. Bushmanov drew the attention of the audience to the need of improving of professional skills of health specialists in the field of radiation protection and safety of staff in radiation therapy. FMBC and IAEA lecturers of the course presented the conceptual basis and principles of radiation protection and safety, as well as international standards and IAEA recommendations. Total of 36 experts from Russia, Montenegro, Armenia and Belarus took part in the course. Medical physicists, radiation safety engineers and radiation hygienists attended lectures on radiation protection of personnel and the public; on preventing radiation accidents in radiation therapy, and took part in practical exercises on radiotherapy facilities design and shielding calculation.

News from the Network Members

◆ Joint IRSN-NIAID/HHI meeting – December 2023, Paris, France

by Andrea DiCarlo-Cohen, Director of the NIAID, NIH Radiation and Nuclear Countermeasures Program (RNCP).



Organized as a means of encouraging collaborations between the NIAID and the IRSN, originally codified in a Statement of Intent to Collaborate signed by both organizations in 2015, In December of 2022, the IRSN (Fontenay-aux-Roses, France) and the NIAID held a joint meeting in France to explore models and medical countermeasures for radiation-induced cutaneous and gastrointestinal injuries. There were also presentations on radiation biodosimetry, as well as of radiation

dosimetry. Invited speakers included investigators from the NIAID-funded research portfolio, IRSN scientists, and several European subject matter experts. The goal of the meeting was to provide a forum for the exchange of research ideas, to foster future collaborations between U.S. and European-funded institutions. Future plans will allow for the funding of joint research projects of joint research projects.



◆ NIAID Advanced Technologies in Radiation Research (ATRR) Workshop – Rockville, MD, USA August 17-18,2023

This workshop was sponsored by the NIAID Radiation and Nuclear Countermeasures Program (RNCP); the Radiation Research Program (RRP), National Cancer Institute (NCI); the National Aeronautics and Space Administration (NASA); and the Radiation Injury Treatment Network (RITN).

The meeting was held on August 17th - 18th, 2023 at the NIAID Conference Center (5601 Fishers Lane, Rockville, MD 20852) for in-person attendees and via Zoom for remote participants. The ATRR Workshop was offered as a hybrid meeting, with invited speakers, moderators, and expert panelists attending in person, with a possibility to attend virtually via the Zoom platform.

[More information is available here.](#)



News from the Network Members

Updates from the WHO Collaborating Center REAC/TS – Oak Ridge, TN, USA – by Dr C. Iddins, Director of REAC/TS

1. REAC/TS Cytogenetic Biodosimetry Laboratory has posted a new version of the chromosome challenge game with many new features (timer and different complexity levels). Link to game: <https://apps.ornl.gov/chromosomechallenge/>
2. REAC/TS conducted the virtual, microREM course for 46 participants. Those included participants from the United States, Canada, United Kingdom, Ukraine, and Japan. This virtual course is an abridged version of REAC/TS' Radiation Emergency Medicine (REM) class. Topics include basic radiation physics; radiation detection/measurement/identification; early evaluation and treatment of acute radiation syndrome (ARS), cutaneous injuries, and internal contamination; prehospital and hospital readiness; and patient decontamination.

3. REAC/TS staff— Dr. C. Iddins, Dr. M. Ervin, Dr. A. Balajee— attended the ConRad 2023 in Munich,



Germany. Short for “Conference on Radiation,” ConRad 2023’s theme was the “Global Conference on Radiation Topics - Preparedness, Response, Protection and Research.” Dr. Iddins chaired the session in which Dr. Balajee presented, “Radiobiological Effects of FLASH on Human Peripheral Blood Lymphocytes: A multiparametric Approach.”

4. REAC/TS partnered with the American College of Medical Toxicology, the Region 7 Regional Disaster Health Response Ecosystem, and the Region 4 Southern Regional Disaster Response System to provide the Chemical and Radiological Agents of Opportunity for Terrorism course, a two-day activity on emergency medical response to exposures from radioactive materials and toxic chemicals. The Agency for Toxic Substances & Disease Registry’s Office of Emergency Management and the CDC National Center for Environmental Health supported the development of this unique course to familiarize health care providers and responders with toxic exposures. There were over 350 participants.

◆ A seminar for students who evacuated from Ukraine to Nagasaki University and visited the Fukushima coastal areas, in August 2022

By Prof. Noboru Takamura, Nagasaki University, Japan

Since summer 2022, Nagasaki University (NU) welcomed Ukrainian students to provide them with an opportunity to learn about Japanese culture, Nagasaki’s history, Nagasaki peace studies, and international health. In Aug 2022, NU organized a visit to the Fukushima coastal areas, so Ukrainian students could learn about its recovery process from the complex disasters (earthquake, tsunami, and nuclear accident of 2011). Radiation medical science experts of NU contributed to Fukushima’s recovery through radiation health risk communication with residents in affected areas. Students learned the importance of engaging of radiation experts with local communities. Students visited Ukedo Elem.School in Namie, which was promptly evacuated after the earthquake and completely destroyed by the tsunami. Next, they visited the Great Japan East Earthquake and Nuclear Disaster Memorial Museum, in Futaba Town and participated in field visits organized by the Institute of Environmental Radioactivity at Fukushima University, to learn about Fukushima's current environmental situation.

Finally, Ukrainian students visited a home in Kawauchi Village to learn more about risk communication between residents and experts to speed a community’s recovery after a nuclear disaster. We hope that they will contribute to the recovery of Ukraine in the future, based on their experiences in Japan.

We prepared the video program about this seminar, which you and [watch here](#) .



New Publications

◆ Implementation of nuclear and radiological emergency preparedness and response requirements in EU Member States and neighbouring countries - Final report

In order to maintain a high level of Emergency Preparedness and Response, the EU has laid the foundations of a robust legal framework. Whilst a set of guidelines provided by the IAEA exists on the matter, the EU framework is legally binding for all Member States. Following the Fukushima disaster, two fundamental Directives were adopted laying down basic safety standards and requirements in radiation protection and nuclear safety, including radiological and nuclear emergency preparedness & response (EP&R) at the EU level, introducing several new and strengthened provisions compared to earlier Directives: Council Directive 2013/59 of 5 December 2013, laying down basic safety standards (BSS) for protection against the dangers arising from exposure to ionising radiation; Council Directive 2014/87 of 8 July 2014, amending Directive 2009/71/Euratom establishing a Community framework for the nuclear safety of nuclear installations (NSD). At the international level, IAEA General Safety Requirements (N°GSR Part 7), published in 2015, is a fundamental document that provides guidelines and recommendations for governments, authorities and licensees in the EP&R field. The two European organisations HERCA and WENRA have carried out extensive work on EP&R, starting in 2011, just after the Fukushima accident, with “the overall aim to come up with practical and operational solutions leading to a uniform and efficient way



European Commission, Directorate-General for Energy, *Implementation of nuclear and radiological emergency preparedness and response requirements in EU Member States and neighbouring countries – Final report*, Publications Office of the European Union, 2023

<https://data.europa.eu/doi/10.2833/270804>

of dealing with any serious radiological emergency situation, regardless the national border lines.” As a result of this work, the “HERCA-WENRA Approach¹” was approved by the board of HERCA in June 2014, proposing “a response mechanism for the Early Phase of an accident for a better cross-border coordination of protective actions”.

◆ Review – Considerations of Medical Preparedness to Assess and Treat Various Populations During a Radiation Public Health Emergency

A new review article on special populations in *RadRes* should assist researchers in ensuring that preclinical studies are considering all variables that might be in play during a radiological or nuclear incident and should also inform public health emergency medical planners on what to expect in terms of possible variations in humans response to both radiation exposure and medical countermeasure administration.

Winters TA, Cassatt DR, Harrison-Peters JR, Hollingsworth BA, Rios CI, Satyamitra MM, Taliaferro LP, DiCarlo AL. Considerations of Medical Preparedness to Assess and Treat Various Populations During a Radiation Public Health Emergency. Radiat Res. 2023 Mar 1;199(3):301-318.

◆ Survival and hematologic benefits of romiplostim after acute radiation exposure supported FDA approval under the Animal Rule.

Patients exposed to acute high doses of IR may develop dose-dependent BM depression with resultant pancytopenia. Romiplostim (RP), a recombinant thrombopoietin receptor agonist protein, promotes progenitor megakaryocyte proliferation and platelet production and is an approved treatment for patients with chronic immune thrombocytopenia. The study evaluated the postirradiation survival and hematologic benefits of a single dose of RP with or without pegfilgrastim (granulocyte colony stimulating factor) by conducting a well-controlled, blinded, good laboratory practice-compliant study in rhesus macaques.

Bunin DI, Javitz HS, Gahagen J, Bakke J, Lane JH, Andrews DA, Chang PY.
PMID: 37224926.

New Publications

◆ [No evidence of thyroid consequences in seven nuclear workers at the Tokyo Electric Power Company Fukushima Daiichi Nuclear Power Plant accident: 10-year follow-up results of thyroid status](#)

Seven emergency nuclear workers, who had internal exposure due to an intake of radionuclides, mainly I-131, during the emergency response operation in March 2011, after the accident at the Tokyo Electric Power Company (TEPCO) Fukushima Daiichi Nuclear Power Plant (FDNPP), visited the National Institute of Radiological Sciences (NIRS) outpatient clinic for medical evaluation. They were followed up after their first visit for 10 years. The estimated committed equivalent doses to the thyroid were distributed between 3.2 to 1.2×10 Sv. This group thought to be received highest exposure at the accident. None of the workers had symptoms related to abnormal thyroid function. The examinations, including thyroid function tests and ultrasound, detected no abnormalities related to radiation exposure. However, there is a need for continuous monitoring of their thyroid status for longer periods in the future.

Tatsuzaki H, Kishimoto R, Kurihara O, Tominaga T, Yamashita S. No evidence of thyroid consequences in seven nuclear workers at the Tokyo Electric Power Company Fukushima Daiichi Nuclear Power Plant accident: 10-year follow-up results of thyroid status. *J Radiat Res.* 2023 Mar 23;64(2):294-299. doi: 10.1093/jrr/rrac092. PMID: 36610720; PMCID: PMC10036087.

◆ [A Special Issue on Fukushima Has Been Released a Decade After the Great East Japan Earthquake](#)

Here the ten years achievement of the Fukushima Health Management Survey is summarized as a special issue in the *Journal of Epidemiology* Volume 32, also available for free download.

Kotaro Ozasa, Kota Katanoda, A Special Issue on Fukushima Has Been Released a Decade After the Great East Japan Earthquake, *Journal of Epidemiology*, 2022, Volume 32, Issue Supplement_XII, Pages S1-S2, Released on J-STAGE December 05, 2022, Online ISSN 1349-9092, Print ISSN 0917-5040, <https://doi.org/10.2188/jea.JE20220185>, https://www.jstage.jst.go.jp/article/jea/32/Supplement_XII/32_JE20220185/_article/-char/en

◆ Largest RENEb biosimetry inter-laboratory comparison exercise now published at RadRes

By M. Port, D. Endesfelder, U. Oestreicher, M. Abend

RENEb ("Running the European Network for Biological Dosimetry and Retrospective Physical Dosimetry") follows certain tasks: sustain laboratory skills for providing dose estimations in situations of intentional (e.g., terrorist or military act) or unwanted release of radiation (e.g., nuclear power plant accident) to support medical management decision making. Regular validation of the techniques through interlaboratory comparisons is essential to guarantee high quality results. For that purpose, RENEb has organized various inter-laboratory comparison exercises for preparedness reasons. In 2021, the largest so far performed exercise was run and organized in collaboration with Bundeswehr Institute of Radiobiology.

Different biological and physical dosimetry assays were used including cytogenetic assays (dicentric chromosome assay, cytokinesis-block micronucleus assay, stable chromosomal translocation assay and premature chromosome condensation assay), molecular biological assays (gamma-H2AX foci, gene expression) and physical dosimetry-based assays (electron paramagnetic resonance, optically or thermally stimulated luminescence). Irradiated samples were sent to 86 specialized teams in 46 organizations from 27 nations for dose estimation and identification of three clinically relevant groups. All results are covered by seven articles and now published at *Radiation Research* as a special issue.

Upcoming events, Training courses

◆ [IPRED VII](#) – International Preparedness & Response To Emergencies & Disasters on January 14-17, 2024 in Israel

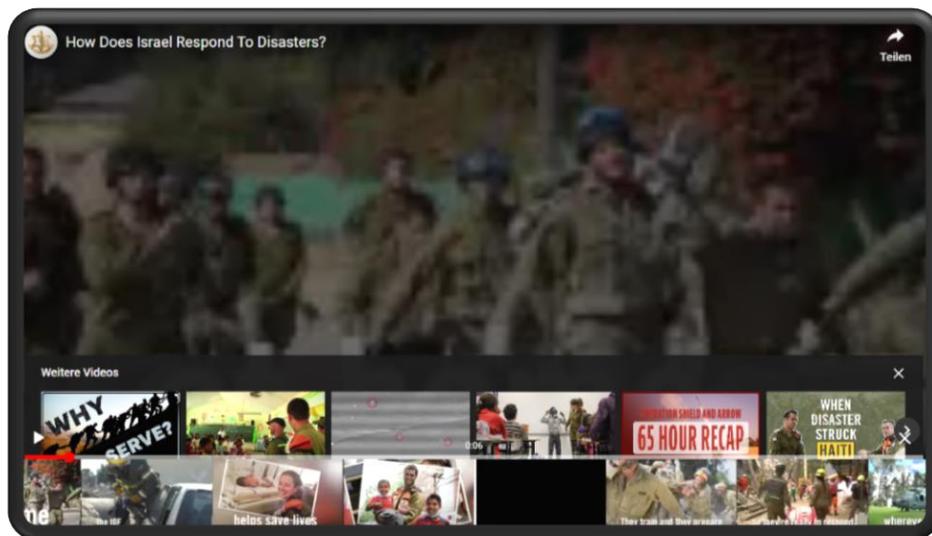
Since 2010 this international conference is held every 2 years. It enables exchange in dealing with emergencies and disasters worldwide in lectures and discussions over two days. Additionally there will be an exhibition with innovations dealing with emergencies and disasters. On the third day an exercise will reveal those innovations and practices.

Some of the topics will be: Global solidarity and equity, research during emergencies, mil-civ cooperation and collaboration, emergency education, information management, logistics and operational support.

Abstract submission deadline has been postponed to June 30, 2023.

You can also join the [IPRED community!](#)

Video about “How does Israel Respond to disasters?”



◆ Radiological protection during armed conflict: Improving regulatory resilience and operational applications –

23-24 November 2023 – Oslo, Norway

Organized jointly by NEA/OECD and Norwegian Nuclear Safety Authority (DSA), this workshop will address issues of radiological protection in the context of armed conflict — including potential radiological emergencies caused by war-related damage to nuclear and radiological facilities. The specific objectives are:

1. To share knowledge and experience of the Ukrainian and the other participating national regulators, as well as relevant international organizations and associations, on the operational management and regulation of radiological protection and public health during and after armed conflict;
2. To identify the challenges of maintaining or restoring radiation safety, including the involvement of different stakeholders and the consideration of all hazards, as well as the application of standard emergency preparedness, response actions during wartime, and post conflict recovery strategies;
3. To develop proposals for further international collaboration in this area, to consider how to adapt the regulatory framework and practice for the radiological protection of workers, the public and the environment during wartime, taking into account the challenges and risks associated with armed conflict.

[More information available here.](#)

Upcoming events, Training courses

◆ StTARS workshop: An introduction into Software tools for Triage of the Acute Radiation Syndrome - from 7-10 November, 2023 – Oak Ridge, TN, USA

M. Port, P. Ostheim, M. Abend, Institute of Radiobiology, Munich, Germany; C. Iddins, REAC/TS, Oak Ridge, TN, USA.



StTARS 2023

New software tools developed through multi-lateral collaboration of Germany, France and USA to allow an integrated estimation of dose (BAT, WinFRAT) and prediction of acute radiation syndrome (ARS) severity based on changes in blood cell counts (H-module) in the first days after an exposure to ionizing radiation. StTARS workshop (WS) will introduce these tools and provide first hand tuition about their strengths and limitations. StTARS WS will offer a deep insight into diagnostic and

therapeutic strategies that are currently under development - such as the use of mesenchymal stem cells to manage local radiation injuries.

In addition, WS participants will practice your diagnostic skills by using the new app for predicting clinically relevant degree of the ARS using a case reports database including Chernobyl cases and other accidental industrial exposures.

At the beginning of the course you will receive copies of the software tools and the access to case reports database to download onto a personal laptop. The tools and dataset can then be used by the participants for further training and teaching.

After a great success of the first workshop held in 2019, this second workshop will be hosted by the WHO Collaborating Center REAC/TS in Oak Ridge, TN.

[Registration is open and limited to 50 attendees .](#)

Upcoming events, Training courses

◆ 7th European Radiation Protection Week (ERPW) in Dublin on October 9-13, 2023

The final programme will be available from September 8, 2023 on, but the main [themes](#) will be, amongst others, ionizing radiation detection and protection principles, computation and modelling for radiation protection and dosimetry (inc. AI/ML/3D printing applications) and emergency preparedness. The deadline for abstract submission has already expired in May. There is the possibility of an early [registration](#) before July 31, 2023 with a discount.



◆ The ERPW-2022 that took place in Estoril, Portugal, presentations are now available at the site of the conference: <https://erpw2022-portugal.eu>

[Continuing Medical Education Courses by REAC/TS from Oak Ridge Institute for Science and Education](#)



Upcoming events, Training courses

◆ Courses and Webinars offered by REAC/TS as part of the Oak Ridge Institute for Science and Education, Tennessee

Three-day in-person REAC/TS course teaching treatment of patients involved in radiological or nuclear incidents. Each participant can be designated for a maximum of 15.75 ACCME AMA PRA Category 1 Credit(s)TM.

Scheduled training dates:

[August 1-3, 2023](#)

[August 22-24, 2023](#)

There are also possibilities for courses to be held in an individual location by contacting the REAC/TS Education Coordinator: gail.mack@orau.org.

◆ NERIS Workshop October 9, 2023 in Dublin, Ireland

Subjects of this Workshop will be radiological impact assessment, protective actions, decision support, disaster informatics, holistic and inclusive framework for preparedness for emergency response and recovery and new challenges for emergency preparedness, response and recovery. [NERIS Workshop registration](#) is possible until July 31, 2023.

The deadline for sending abstracts to the NERIS Secretariat (sec@eu-neris.net) is June 30, 2023.

◆ WHO on-line training courses

- [OpenWHO platform](#) offers hundreds of on line training programs on various topics including those on preparedness, response, risk assessment and clinical management of health emergencies
- [WHO Academy / News](#)

Disclosure

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