



Guest Editorial

Dear Colleagues,

It is my pleasure to address you through the REMPAN e-Newsletter today.

When the **IAEA's Incident and Emergency Centre (IEC)** was established ten years ago, from the very first moment it was not only meant to be the global focal point of coordinating international response to nuclear and radiological incidents and emergencies. An equally essential part of its mission has always been to be an information hub sharing the latest developments in emergency management and providing best practices of emergency preparedness and response. Over the years we were constantly improving our EPR efforts together. We developed standards and guidelines, published dozens of publications and conducted uncounted workshops and trainings. We only could do so, because we also had your support and contributions.

The **10th anniversary** of the IEC is an ideal moment to take these efforts to the next level. With comprehensive support of our Member States and numerous international partner organizations, we organize one of the biggest conferences on emergency preparedness and response so far. We are very happy to have the WHO on-board, too, as we share a long history of close collaboration and partnership.

We encourage all those who are interested in discussing latest developments and challenges to join us from 19-23 October 2015 at the IAEA Headquarters for the first **International Conference on Global Emergency Preparedness and Response**. High calibre speakers and numerous refresher workshops guarantee the conference will be a time well spent. But it is your participation that will make it a success.

I am very much looking forward to welcoming you in Vienna this autumn.

Dr. Elena Buglova
Head, IAEA's Incident and Emergency Centre



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News – From REMPAN Secretariat

By Zhanat Carr, WHO, Geneva, Switzerland

Warm greetings from Geneva to all REMPAN colleagues and friends of REMPAN!

In no time the half of 2015 is already gone, time flies way too fast while there are so many things to do; I just wish I had 48 hours in a day! Past six months were very busy for many of us, rich with events and [too many] travels!

Let's see, what we have been up to in a briefing style report:

- In January, I presented our work and activities at the [HERCA's Emergency Group meeting](#) in Brigs, Switzerland, hosted by the Swiss Nuclear Safety Authority – ENSI.
- In February, the [Global Health Security Advisory Group's \(GHSAG\)](#) WG on Medical Countermeasures against Radio-Nuclear Threats meeting was hosted by the NEA in Paris. Jean-René Jourdan stepped down from the RNWG Chair position and the new RNWG Chair is François Paquet – IRSN's Senior Expert in Radiological Protection. The new Secretary of this WG is Ryan Morhard from the Office of ASPR/HHS, USA. WHO participates at the RNWG as an observer.
- In March, the 4th annual coordination meeting of the [European RENEb network](#) took place in Rome, Italy, hosted by ENEA. WHO is a member of the RENEb's Advisory Board that oversees the project's implementation. Read more about RENEb in the current issue of the Newsletter.
- [KIRAMS-REMPAN Asian Workshop](#) on Medical Preparedness and Response was hosted by KIRAMS on March 10-12, 2015. Read more information below.
- The [UN World Congress on Disaster Risk Reduction](#) took place in Sendai, Japan on March 14-18, 2015. Read a short report about this event, where WHO has played a major role.
- In April, NEA/OECD's held the 73rd meeting of the [Committee on Radiation Protection and Public Health \(CRPPH\)](#), where WHO reported on its' current activities. The CRPPH new Chairman is Mike Boyd of the US Environmental Protection Agency.
- The 1st Face-2-Face meeting of the [REMPAN's WG on Internal Contamination and Monitoring and Management](#) met in Bruges, Belgium on April 23, 2015 as a satellite event to the IM-2015 conference. The WG discussed the scope of proposed activities and ways of addressing the identified issues. Read on for more information about the meeting.
- WHO participated in the discussions during the [NERIS workshop](#) held in Milano on April 28-29, 2015 and reported on relevant activities pertaining to management of social impact of disasters and emergencies in the light of the post-Sendai framework for disaster risk reduction.
- In March and May, two technical consultations were held by IEC/IAEA in Vienna, Austria, to revise the [EPR-Medical](#) jointly published by IAEA and WHO in 2005. Several REMPAN experts are involved in the revision process; the target date for publication is 2016. Many thanks to those of the network's experts who provided feedback on the areas of improvement for EPR-Medical.
- In May, WHO took part as an observer in the [IAEA's Advisory Mission](#) to review the status of medical preparedness for radiation emergencies in Kuwait. This Mission was undertaken upon the invitation of the Kuwait Government to IAEA; the report is now in preparation by the IEC/IAEA. We hope that Kuwait mission will become a first step towards future joint review missions on emergency preparedness and response, which would be jointly planned and executed by both agencies, whenever a review of medical and public health aspects of the reviews are considered.

News – From REMPAN Secretariat

(Continued)

- In May, WHO has contributed to the [ConRad-2015](#) conference held in Munich, Germany – see this issue of the Newsletter for more information on the event.
- In June, WHO has contributed to the [European RICOMET conference](#) held in Slovenia under the frame of [OPERRA](#), [PREPARE](#), and [EAGLE](#) projects and focused on various aspects of emergency risk communication, media stakeholders and the role and ways of using the social media.
- In June, WHO contributed to the [NEA's 4th Science and Values Workshop](#) held in Moscow and hosted by the Federal Medical Biological Agency and Russian nuclear safety authority "RosAtom". Read further on for more information about the event.
- In June, WHO attended the meeting of the [International Conference Program Committee](#) for the EPR-2015 conference held by IEC/IAEA in Vienna, Austria to discuss the conference topics, sessions, and shape up the program.

This was an outline of the events and activities that kept REMPAN Secretariat very busy and for most of the time – out of the office.

July brought us a very hot weather in Geneva. I wish you all a pleasant summer holidays and, for those of you who are experiencing the same heat wave at the moment, do not forget to hydrate yourselves well enough and to use sunscreen when you go to the beach!



With
warmest regards,
Dr Zhanat Carr
WHO REMPAN Secretariat

Scientific Events

The 3rd UN World Conference for Disaster Risk Reduction and post-Sendai Framework, Japan

By Jonathan Abrahams, Emergency Risk Management and Humanitarian Response Department, WHO, Geneva, Switzerland

The **3rd World Conference for Disaster Risk Reduction (WCDRR)** is the most important event in the field of emergency and disaster risk management since the Hyogo Framework for Action (HFA) agreed in Kobe/Japan ten years ago. The 3rd WCDRR was also the first large-scale multilateral conference for the post-2015 development agenda, and will be a forerunner to the conferences on the Sustainable Development Goals and the UN Climate Change Conventions later this year. The WCDRR was attended by over 6,500 participants including 2,800 government representatives from 187 governments. The Public Forum had 143,000 visitors over the five days of the conference making it one of the largest UN gatherings ever held in Japan.



Post-2015 Sendai Framework for Disaster Risk Reduction

was adopted as the successor to the HFA. The Framework puts health at the heart of its ambition to save lives and reduce losses, thus protecting people's health from the risks of disasters. Throughout the recent negotiations, Member States have indicated that many dimensions of people's health should be recognised in the post-2015 framework, such as building the resilience of health systems for all types of disasters, making hospitals and health facilities safe and operational in disasters, giving focus to epidemics and pandemics, and including people with life-threatening and chronic diseases in DRR planning and implementation.



WCDRR Health Delegates – Sendai, Japan – March 2015

The central place of health to Disaster Risk Reduction (DRR) as a shared responsibility of all sectors was promoted in a number of events at WCDRR. UN Secretary General Ban Ki-moon and other UN Chief Executives took part in a dialogue on the United Nations system's commitment to supporting the implementation of DRR.

Among other things, working sessions focused on health in the multi-stakeholder segment, several health events in the Public Forum were co-organised by WHO, UNAIDS, UNFPA, UNISDR and partners. Several events focused on the lessons learnt from the management of Fukushima Daiichi NPP accident, including a Public Forum organized by Fukushima University. More information on the WHO involvement in the Conference and the Framework is provided on the [WHO website](#). ♦

Scientific Events

Regional Biodosimetry Meeting organized by LBDNet in Buenos Aires, Argentina

By Marina DiGiorgio Autoridad Regulatoria Nuclear (ARN), Buenos Aires, Argentina and Omar Garcia, Centro de Protección e Higiene de las Radiaciones (CPHR), Cuba

On November 17-21, 2014, the **Latin American Biological Dosimetry Network (LBDNet)** organized the "Regional Meeting to Standardize Biodosimetry Methodologies to Support Medical Emergencies Response" in Buenos Aires, Argentina. The objective of the meeting was to update, harmonize and disseminate the procedure for the activation of the LBDNet.



Regional Meeting to Standardize Biodosimetry Methodologies to Support Medical Emergencies Response – Buenos Aires, Argentina – November 2014

The meeting also aimed at extending the micronucleus technique and the analysis of images obtained by applying the technique of premature chromosome condensation-ring (PCC-R) through the whole region. All of these objectives will contribute to strengthening capacities for medical response to nuclear and radiological emergencies in Latin America and the Caribbean. This activity was implemented through the framework of the [IAEA technical cooperation](#)

project RLA/9/076 with funding by the European Union. ♦



LBDNet

Scientific Events

1st Face-to-Face Meeting of the REMPAN WG on Internal Contamination in Bruges, Belgium

Chunsheng Li, Radiation Protection Bureau, Health Canada, Ottawa

On April 23, 2015, the **REMPAN WG on Internal Contamination** had its 1st Face-to-Face meeting in conjunction with the IM-2015 Conference in Bruges, Belgium.

The WG is co-chaired by Dr Chunsheng Li (Health Canada) and Dr Florence Menetrier (CEA, France) and consists of the international experts in the areas of internal contamination monitoring, assessment, and management who come from the leading centres of the Network.



C.Li, W. Ha, C. Challeton-de Vathaire, I. Sierra, F. Menetrier, Z. Carr, A. Rojo, M. Lopez, A. Leiterer, M. Tremblay, O. Kurihara, E. Kim, G. Etherington, R. Cruz-Suarez (from left) – Internal Contamination Meeting – Bruges, Belgium – April 2015

The WG discussed potential areas of collaboration which would address current gaps in the area of emergency monitoring and management of internal contamination with radionuclides and proposed the projects to fill these gaps. In the focus of the discussion, there were protocols for population monitoring, especially for children, and for medical management of internal contamination. Linkages were made to the relevant work of IAEA and EURADOS. ◆

Scientific Events

4th Workshop on Science and Values in Radiological Protection Decision-making in Moscow, Russia

By Andrey Bushmanov, Burnasyan Federal Medical Biophysical Center (FBMC), Moscow, Russia

The 4th workshop **“Science and Values in Radiological Protection”** was held on June 09-11, 2015 in Moscow, Russian Federation, and contributed to the integration of new scientific and technological developments and socio-political considerations of radiological protection.

The objectives of the 4th workshop co-organized by the State Atomic Energy Corporation **“Rosatom”** Federal Medical Biological Agency (FMBA) / Burnasyan Federal Medical Biophysical Centre (FMBC) were to better understand how science and values aspects of these issues may influence the evolution of the system of radiological protection, and how these aspects should be included and transparently articulated in radiological protection decision-making.



4th Science and Values in Radiological Protection Workshop – Moscow, Russia – June 2015

Alongside innovative scientific and academic phenomena, issues like consent, equity, control and responsibility are also very important for defining and imposing appropriate radiological protection measures and criteria.

Following the Fukushima Daiichi nuclear accident experience, the dimensions of science and values were addressed by Russian and international delegates through the following three key topics: Medical Surveillance, Use of Effective Dose and Safety Concerns. ◆

Scientific Events

KIRAMS-REMPAN Asian Workshop on Medical Preparedness and Response to Radiation Emergencies in Seoul, Korea

By Zhanat Carr, WHO, Geneva, Switzerland

On March 10-12, 2015, the Korea Institute of Radiological & Medical Sciences (KIRAMS) hosted the international **Workshop on Medical Preparedness and Response to Radiation Emergencies** organized under the umbrella of WHO REMPAN collaboration. The workshop participants came from the national authorities of 16 countries including representatives of IAEA and WHO. National officials involved in emergency response planning and decision making, have reviewed their respective national capacities and discussed the remaining gaps which they are facing, and how these arrangements fulfil the requirements of the International Health Regulations (IHR, 2005).



KIRAMS-REMPAN Asian Workshop – Seoul, Korea – March 2015

The group took advantage of the opportunity to discuss potential ways of strengthening regional preparedness and response through the bilateral and regional cooperation, as well as the opportunity to access the technical expertise and advice through international expert networks, in case national expertise may be lacking for various reasons.

The meeting proposed a list of measures which could be implemented for strengthening the preparedness for radiation emergencies in the region. A special focus was placed on the role of risk communication in mitigating the aftermath of radiological and nuclear emergencies in the light of the recent Fukushima Daiichi Nuclear Power Plant accident in 2011. The workshop followed by a one-day meeting on radiation dosimetry and biological dosimetry which are important components of the emergency management and are included in the list of IHR requirements for national core capacities. The [Workshop report](#) will be soon online. ◆

Scientific Events

Global Conference on Radiation Topics, ConRad 2015, in Munich, Germany

By Matthias Port, Bundeswehr Institute of Radiobiology affiliated to the University of Ulm, Munich, Germany

On May 04-07, 2015, the Bundeswehr Institute of Radiobiology affiliated to the University of Ulm hosted the **Global Conference on Radiation Topics, ConRad 2015** (21st Nuclear Medical Defence Conference) held in Munich, Germany. The objectives of this international and interdisciplinary biennial conference were to gain knowledge by combining radiation epidemiology with molecular biology to assess health effects and to succeed in improved radiation accident management by close international networking as well as cooperation among different national institutions.



Global Conference on Radiation Topics, ConRad 2015 – Munich, Germany – May 2015

The conference brought together about 250 military and civilian scientific delegates and professionals from 30 countries. The participants reviewed new insights in radiation accident preparedness and management as well as new research findings in radiation epidemiology, medicine, biology, physics and radiation protection. The [conference website](#) provides more detailed information. Furthermore this conference was used for vivid extensive discussions, to make new contacts and to strengthening existing relationships.

The next Nuclear Medical Defence Conference, **ConRad 2017**, will be held in Munich on May 08-11, 2017. ◆

Exercise and Training

“Pomoriye-2015” – Training of Communication with the Public in the Arkhangelsk Region, Russia

By Andrey Bushmanov, Burnasyan Federal Medical Biophysical Center (FBMC), Moscow, Russia

The training “**Pomoriye-2015**” held in the Arkhangelsk Region on May 19-21, 2015, was the first specialized training at the Russian state level to address communication with the public and raise public’s awareness in case of a radiological accident. The training drilled decision making algorithms and procedures to alert the general population through mass media in case of radiological incidents.

The training was held under the framework of the **Joint Coordinating Committee for Radiation Effects Research** (JCCRER), a bilateral Government committee representing agencies from the US and the Russian Federation tasked with coordinating scientific research on the health effects of exposure to ionizing radiation in the Russian Federation from the production of nuclear weapons.

Two simulated scenarios were trained, an accident due to a fire at the Center of the Nuclear Medicine Department and due to an orphan radioactive source.



“Pomoriye-2015” Training – Arkhangelsk Region, Russia – May 2015

Specialists of the **WHO/REMPAN Collaboration Centre** in Moscow participated as invited experts and monitored the correctness of the medical and dosimetry information. Further participants included the Arkhangelsk Regional Government, EMERCOM of the Arkhangelsk Region, the Federal Service for Hydrometeorology and Environmental Monitoring as well as other federal and regional offices and the Nuclear Medicine Center of the FMBA of Russia.

The media of the Arkhangelsk Region and the other local representatives of the Murmansk region attended the training as observers.

The outcome of the training was considered a success by participants and observers. Specialists the WHO/REMPAN Collaboration Center in Moscow stressed the necessity to provide additional information on the iodine thyroid blocking to professionals and the public. ◆

Exercise and Training

Large-Scale Maneuver of the German Medical Armed Forces in Feldkirchen, Germany

By Matthias Port, Bundeswehr Institute of Radiobiology affiliated to the University of Ulm, Munich, Germany

On March 23-26, 2015, the CBRN Medical Defence Task Force of the **Bundeswehr Institute of Radiobiology** attended at a large-scale maneuver of the German Medical Armed Forces in Feldkirchen, Germany. The selected audience from army, politics and economics was given detailed information about the complete spectrum of the mission of the **German Medical Armed Forces**. Rescue stations, airborne rescue centers, mobile air rescue teams, heavy protected ambulances and the emergency transport helicopter NH-90 TTH were demonstrated. In addition, Task Force members informed about the wide range of tasks and skills of the Med-A Task Force team at a presentation platform and information point.



The numerous national and international guests used the provided information for technical exchange between different branches of services and discussed possible common topics for joint cooperation. The possibilities of the Task Force for the assessment of the severity of Acute Radiation Syndrome (physical, clinical and biological dosimetry) and of therapeutic approaches were demonstrated to the visitors. ◆

Exercise and Training

First EU-RENEB Gene Expression Exercise

By Matthias Port and Michael Abend, Bundeswehr Institute of Radiobiology affiliated to the University of Ulm, Munich, Germany

There is some evidence that gene expression changes (mRNA level, transcriptional changes) occurring after radiation exposure might be applicable for the field of biodosimetry (*Badie et al., Radiation Research 180, 2013*).

The **EU-RENEB** <http://reneb.eu/> exercise was organized by the **Bundeswehr Institute of Radiobiology**. Altogether 4 labs (England, Belgium and two labs from Germany) participated and two different platforms, namely qRT-PCR and microarrays were utilized. At first, blood samples of two healthy donors were sent to participating labs to establish calibration curves as the focus was on **inter-individual variance** of radiation-induced gene expression. The participating labs decided about the most promising combination of genes and algorithms for efficient dose estimation. Two weeks later 10 blinded blood samples from five healthy donors were provided to the participants. After venipuncture the blood samples were irradiated with 0-4 Gy and the cells cultured in vitro. Participating labs were asked for a fast dose estimate; the report time and the precision of dose estimates were documented.



The results can be **summarized** as followed:

- Dose estimates using qRT-PCR were provided 7-9 h after arrival of the samples in the laboratories, but when employing microarrays dose estimates arrived about 5-times later (only after 35-45.5 h).
- Dose estimates below 2 Gy were in good agreement with the true dose irrespective of the platform used, but estimates became imprecise at doses > 2 Gy.
- The inter-individual variance could be managed by combining different genes or using one gene appearing almost unaltered among individuals.
- The dose estimates based on one gene (qRT-PCR) were as precise as dose estimates based on complex gene signatures consisting of 8-16 genes.
- It appeared as a particular strength of gene expression measurements to correctly discriminate exposed from unexposed blood samples.
- Dose estimates could be accomplished based on one blood sample after exposure and no individual blood samples prior to the exposure were necessary.

A comparison of these examinations with prostate cancer patient blood samples taken pre-exposure and 24 h after the first fractionated therapy is currently under examination. ◆

Exercise and Training

New Online Training Available

By Robert Whitcomb, Armin Ansari and Carol McCurley, Centers of Disease Control and Prevention (CDC), Atlanta, USA

The **Centers for Disease Control and Prevention** (CDC), Radiation Studies Branch launched a new online training module to educate preparedness / response professionals about available medical countermeasures to address internal contamination with specific radionuclides or treat bone marrow suppression from acute exposure to radiation.

This new training module, **Medical Countermeasures for Radiation Exposure and Contamination**, aids in better understanding what medical countermeasures (treatments) are available for radiation exposure and contamination, how they work, and how and when they should be used.



The **training video** is also available by request from CDC-INFO. The training video is one of a series of planned online training modules that address specific topics of interest to public health officials and clinicians.

Additional resources are located on the newly redesigned **radiation emergencies homepage**. ◆

Exercise and Training

Workshop and Summit on Medical Emergency Response in Jakarta, Indonesia

By Nastiti Rahajeng, Center for Metrology and Radiation Safety Technology (PTKMR), Jakarta, Indonesia

On November 26-27, 2014, the **Center for Metrology and Radiation Safety Technology** (PTKMR) BATAN conducted an annual Workshop on Medical Response to Radiation Overexposure and Radiation Accidents in collaboration with the Ministry of Health which took place at Fatmawati Hospital, South Jakarta. The workshop was held to increase knowledge and skills in the management of radiation accident victims. Participants were physicians and paramedics who handling ionizing radiation sources in the hospitals. The 2-day workshop consisted of lecture on the first day and drills in the emergency department on the second day.



Workshop at Fatmawati Hospital – South Jakarta, Indonesia – November 2014

On April 22-23, 2015, the **Emergency Summit 2015** on Medical Response to Radiation Emergencies was held at Dr. Cipto Mangunkusumo Hospital. The participants – doctors, nurses and medical physicists – were given lectures on radiation emergencies by Dr. Makoto Akashi, NIRS Japan and Prof Datuk Abu Hasan, MASTEM Malaysia. In addition, a group exercise assisted by MASTEM's team and the emergency department's personnels was conducted. ◆



Drill at Fatmawati Hospital Emergency Department – South Jakarta, Indonesia – November 2014

Obituaries

Professor Angelina Guskova (1924-2015) – Russia

Angelina Konstantinova Guskova, one of the leading scientists of Russia passed away in Moscow on April 07, 2015 at the age of 91 after a long and serious illness.



Prof. A. Guskova made an invaluable contribution to the development of the clinical management of acute radiation sickness and was the lead expert proving medical care and follow-up of 134 ARS patients after Chernobyl nuclear power plant. Within several months after the accident she prepared a report concerning the accident to UNSCEAR.

Prof. A. Guskova was awarded with the Order of Lenin and the Order of Peoples' Friendship for her outstanding services; she was a Corresponding Member of the Russian Academy of Sciences. For many years she was member of the Soviet delegation to UNSCEAR, and was member of the ICRP Main Commission from 1989 to 1993. She was especially proud of the Gold Medal in Radiation Protection from the Royal Swedish Academy of Sciences, which she received in 2000.

A prominent scientist, she devoted all her life to science and made a major contribution to the scientific progress of international radiation emergency medicine which saved lives of many. Prof. A. Guskova was a hard worker; she encouraged new ideas and communicated with young scientists with maternal affection and care. She created her scientific school in the field of radiation medicine, and raised dozens of scientists.

Angelina Guskova was such a great person, the brightest star in the sky of radiobiology, and her light will shine forever for us.

In imperishable memory of
Prof. Angelina Konstantinovna
Guskova ◆

New Faces

Nick Dainiak named Director of REAC/TS in Oak Ridge, USA

Press release Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, USA

Dr Nicholas Dainiak has been named director of the [Radiation Emergency Assistance Center / Training Site \(REAC/TS\)](#) at the Oak Ridge Institute for Science and Education (ORISE).

In his new position, Dainiak will manage and direct the day-to-day operations of REAC/TS, overseeing response and training teams and directing REAC/TS continuing medical education courses. Dainiak will also ensure support to multiple government agencies for regional and national readiness exercises as well as providing counsel nationally and internationally for the medical management of radiation incidents and development of response protocols.



Dr Nick Dainiak

N. Dainiak previously served as chairman of medicine and clinical professor of medicine at Yale New Haven Health System / Bridgeport Hospital and Yale University School of Medicine. In 2003, N. Dainiak established the first, state-funded biodosimetry laboratory in the US. He also organized and has served as the chair of the Connecticut Radiation Response Planning Group.

“Dr. Dainiak brings more than 35 years of medical expertise to his new role at REAC/TS” said Andy Page, director of ORISE. *“His clinical and academic leadership at Yale will be highly translatable to his role in directing REAC/TS missions in radiation emergency medicine and training”*. ♦

Balajee named Director of Cytogenetic Biodosimetry Lab at REAC/TS

Press release Oak Ridge Institute for Science and Education (ORISE), Oak Ridge, USA

Dr Adayabalam Balajee has been named director of the [Cytogenetic Biodosimetry Laboratory \(CBL\)](#), which is operated as part of the [Radiation Emergency Assistance Center / Training Site \(REAC/TS\)](#) at the Oak Ridge Institute for Science and Education (ORISE).

In his new position, A. Balajee will manage the operations and staff at the CBL, which is one of only two labs in the U.S., where chromosome abnormality analysis is used for ionizing radiation dose assessment.

A. Balajee holds a doctorate degree with a specialization in cytogenetics and molecular biology from Banaras Hindu University, in India. He conducted research as a post-doctoral fellow at the Department of Radiation Genetics and Chemical Mutagenesis at Sylvius Laboratories in the Netherlands.

Dr. A. Balajee

Prior to joining the CBL, A. Balajee held the position of research scientist at the Center for Radiological Research, Department of Radiation Oncology at Columbia University Medical Center in New York, where he had been employed since 1999. A. Balajee also spent five years as a visiting fellow at the Gerontology Research Center at the National Institutes of Health in Baltimore. ♦



New Faces

New Cytogenetics Group Leader at Public Health England (PHE)

By Elizabeth A. Ainsbury, Public Health England Chilton, Didcot, UK

Dr Elisabeth Ainsbury has recently replaced Dr Kai Rothkamm as PHE **Cytogenetics Group Leader** at Public Health England, Centre for Radiation, Chemical and Environmental Hazards (PHE CRCE), UK, heading up the Group's biological dosimetry service and associated research activities.

The Cytogenetics Group continues to maintain an interest in biological and statistical development of biomarkers for radiation exposure and response and networking for provision of biological dosimetry in emergency / mass casualty scenarios, including through the RENEB and WHO BioDoseNet networks. Dr E. Ainsbury can be contacted on:

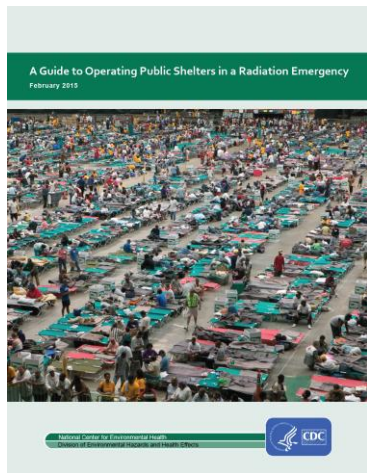
liz.ainsbury@phe.gov.uk,
body.monitoring@phe.gov.uk . ♦



Dr Elisabeth Ainsbury

New Publications

A radiation emergency has the potential to displace a large population from the impacted area, creating a massive need for public shelters. To address this need, the U.S. Centers for Disease Control and Prevention (CDC) partnered with the National Association of County and City



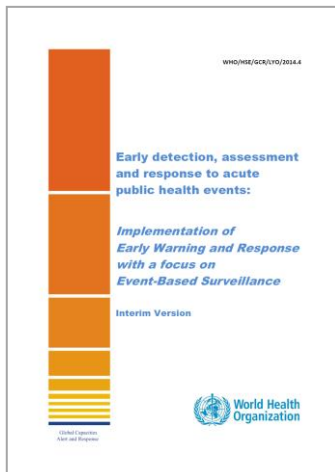
Health Officials (NACCHO) and the Oak Ridge Institute for Science and Education (ORISE) to develop a guide that identifies radiation-specific considerations for shelter operations.

[A Guide to Operating Public Shelters in a Radiation Emergency](#) is the result of a multiyear collaboration among CDC, ORISE, NACCHO, radiation control officials, and stakeholders responsible for shelter operations at all levels of the U.S. government.

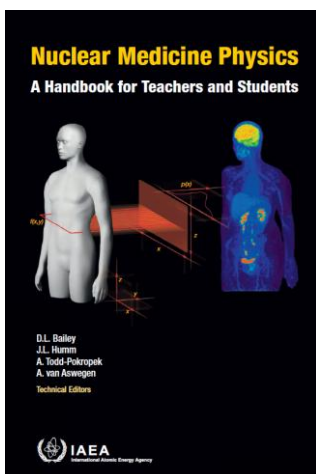


This WHO document [Early detection, assessment and response to acute public health events" – Implementation of Early Warning and Response with a focus on Event-Based Surveillance](#) provides national health authorities with guidance for implementing or enhancing all-hazards early warning and response mechanisms within national surveillance systems. It aims to provide direction regarding the implementation of surveillance capacities, especially event-based surveillance, in order to detect and to respond rapidly to all acute health events and risks from any origin.

The document was developed between March 2013 and March 2014 with the support of a working group made up of country representatives, partners, and WHO colleagues at WHO. ◆



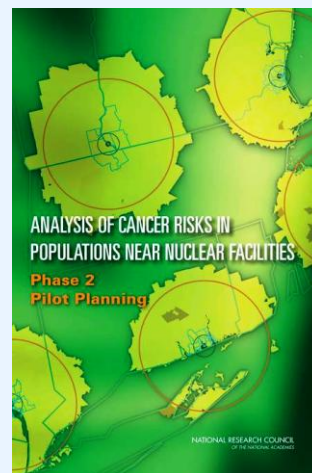
The IAEA publication [Nuclear Medicine Physics: A Handbook for Teachers and Students](#) provides the basis for the education of medical physicists initiating their university studies in the field of nuclear medicine.



The handbook includes 20 chapters and covers topics relevant to nuclear medicine physics, including basic physics for nuclear medicine, radionuclide production, imaging and non-imaging detectors, quantitative nuclear medicine, internal dosimetry in clinical practice and radionuclide therapy. It provides a comprehensive overview of the basic medical physics knowledge required for the practice of medical physics in modern nuclear medicine. ◆

New Publications

Analysis of Cancer Risks in Populations near Nuclear Facilities, a pilot study requested by the United States Nuclear Regulatory Commission (USNRC) assesses the risk of cancer near US nuclear facilities. [Analysis of Cancer Risks in Populations Near Nuclear Facilities: Phase 2 Pilot Planning](#) provides advice to the National Academy of Sciences in performing several tasks related to the planning for a pilot epidemiological study. The report serves as a public record of the committee's advice to the National Academy of Sciences on general methodological considerations involved in carrying out the pilot study. ◆

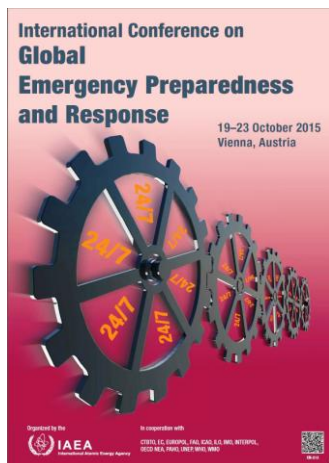


Based on current IAEA, ICRP, UNSCEAR publications, a new "Radiologist's Handbook" (in Russian) was published by the [Armenian Scientific Center of Radiation Medicine and Burns](#) for doctors and medical students. The Handbook will be also translated to Armenian in near future. ◆



Upcoming Events

- **14-15 September 2015, Berlin, Germany**
[17th International Conference on Radioecology and Environmental Radioactivity](#)
- **04-08 October 2015, Hanover, USA**
[EPR-BioDose-2015 International conference](#)
Satellite Meeting „The 4th Coordination Meeting of the WHO BioDoseNet Member Laboratories“ (by invitation only)
- **13-15 October 2015, Barcelona, Spain**
[OPERRA workshops on Somatic effects and Social and Psychological Consequences of radiation and non-radiation accidents](#)
- **19-23 October 2015, Vienna, Austria**
[International Conference on global Emergency preparedness and response](#)
- **20-22 October 2015, Seoul, Korea**
[ICRP – 3rd International Symposium on the System of Radiological Protection](#)
- **09-11 November 2015, Munich, Germany**
[7th MELODI WS “Next Generation Radiation Protection Research”](#)
- **26 November 2015, Brussels, Belgium**
[RENEB Nuclear and Radiological Accidents Establishing a European Network of Biodosimetry](#) (by invitation only)
- **12-13 December 2015, Fukushima, Japan**
[International Workshop on the Fukushima Dialogue Initiative “Rehabilitation of Living Conditions after the Nuclear Accident”](#)



Upcoming Training Courses

- **11-14 August 2015, Oak Ridge, USA**
[Radiation Emergency Medicine \(REM\)](#)
- **17-21 August 2015, Oak Ridge, USA**
[Advanced Radiation Medicine](#)
- **07-09 October 2015, Trnava, Slovak Republic**
[Analytical Platform - Scientific methods and tools for information collection and exchange](#)

New Academic Programme on Radiation Biology

- Technical University Munich (TUM), Germany
[Master of science” Radiation Biology”](#)
The first course to start Winter Semester (WS 15/16)
[More information](#), in particular on detailed content of modules and the module examinations is available online

Disclosure

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