



13th – 16th May, 2019 in Munich, Germany

Bundeswehr Institute of Radiobiology affiliated to the University of Ulm

Monday, 13.05.2019

Arrival; Conference office opened from 10:00 am until 12:00 pm

Icebreaker (Seargents` mess ballroom, build. no. 07)

Note:

In the following time schedule only presenting authors are mentioned.

Co-authorships will be outlined in the abstracts section.

Tuesday, 14.05.2019

Welcoming addresses

Brigadier General (MC) Dr. Hans-Ulrich Holtherm, MSc

Director, Military Medical Science and Medical Service Capability Development and Deputy Commandant Bundeswehr Medical Academy, Munich, Germany

Prof. Dr. Johann Wilhelm Weidringer

Head of Division Training/Quality Management and Executive Physician, Bavarian Medical Chamber, Munich, Germany

Colonel (MC) Prof. Dr. Matthias Port

Bundeswehr Institute of Radiobiology affiliated to the University of Ulm, Munich, Germany
Conference Chairperson

Session Radiation health effects and medical countermeasures I

Prevention and management of long-term adverse health effects associated with exposure to ionizing radiation: an occupational medicine perspective

S. Eder, Bundeswehr Institute of Radiobiology, Germany

Multisite de novo mutations in human offspring after paternal exposure to ionizing radiation

P. Krawitz, Institute for Genomic Statistics and Bioinformatics, University Bonn, Germany

Measuring response to radiation exposure by real-time differential gene expression sequencing analysis

C. Badie, Public Health England - Centre for Radiation, Chemicals and Environmental Hazards (PHE-CRCE), United Kingdom

The German Uranium Miners Biobank – a treasure chest for radiation research

M. Gomolka, Bundesamt für Strahlenschutz, Germany

Key Session I Living in contaminated areas

Introduction

M. Abend, Bundeswehr Institute of Radiobiology, Germany

Application of the Radiological Protection System in Post-Accident Situations - An update on ICRP Publications 109 and 111

A. Nisbet, Public Health England - Centre for Radiation, Chemical & Environmental Hazards, (PHE-CRCE) United Kingdom

Individual dose estimation based on radiation measurements in the environment (and it's relation to the environmental monitoring strategy)

F. Gering, Bundesamt für Strahlenschutz, Germany

Countermeasures, radiological surveillance and evolution of regulations in Belarus, after the Chernobyl accident

V. Averyn, Faculty of Biology at the University of Francisk Skaryna, Belarus

Experiences on reduction of external dose to inhabitants of contaminated areas

K. Andersson, DTU NUTECH Center for Nuclear Technologies, Technical University of Denmark

Coping with radiological exposure in daily life following a nuclear accident: Lessons from the ETHOS and CORE projects in Belarus

T. Schneider, European Platform on preparedness for nuclear and radiological emergency response and recovery (NERIS), France

Towards a holistic approach to protection of inhabitants of contaminated environments: the role of non-targeted effects

C. Mothersill, Department of Biology, McMaster University, Canada

High natural background radiation and health: an overview of current evidence

H. Zeeb, Leibniz Institute for Prevention Research and Epidemiology – BIPS, Germany

How dangerous is living in contaminated areas? Epidemiological thoughts on risks and further studies

P. Scholz-Kreisel, Institute of Medical Biostatistics, Epidemiology and Informatics (IMBEI); University Medical Center of the Johannes Gutenberg University Mainz, Germany

Social and medical preparedness and response against nuclear accident in Japan; lessons learned from Fukushima thyroid examination

S. Yamashita, Fukushima Medical University/Nagasaki University, Japan

Risk communication - a significant contribution to long-term psychosocial support of affected populations

C. Pözl-Viol, Bundesamt für Strahlenschutz, Germany

Session Radiation biology/Radiation physics I

DNA damage interaction on both nanometer and micrometer scale determine overall cellular damage

G. Dollinger, Universität der Bundeswehr München, Germany

Mutational patterns and gene expression signatures in a cell line resistant to cytostatics and irradiation

R. Ullmann, Bundeswehr Institute of Radiobiology, Germany

Radiation –induced mutational changes in the genome, exome and transcriptome of human fibroblasts

A. Kuss, University Medicine Greifswald, Germany

Biological interaction of a static magnetic field (SMF) with ionizing irradiation

T. Schmid, Institute of Innovative Radiotherapy, Helmholtz Zentrum München, Neuherberg, Germany

Research in radiotoxicology and the 3Rs - Replace, Reduce and Refine – observations

N. Griffith, CEA, France

Automatic scoring of dicentric chromosomes and the detection of partial body exposure: Statistical considerations

D. Endesfelder, Bundesamt für Strahlenschutz, Germany

Is there any similarity in gene expression profile in response to radiation therapy, independently of the cancer type?

J. Polanska, Silesian University of Technology, Gliwice, Poland

Conference dinner at “Bräustüberl Weihenstephan” Freising

Wednesday, 15.05.2019

Key session II: Latest trends in radiation preparedness

Introduction

M. Port, Bundeswehr Institute of Radiobiology, Germany

Development of automated high throughput biodosimetry tools for radiological/nuclear mass casualty incidents

A. Balajee, Oak Ridge Institute for Science and Education, USA

Integration of local, national and international medical responses in a mass casualty radiological/nuclear incident

N. Dainiak, Yale University School of Medicine, USA

Radioprotective effect of vitamin C as an antioxidant

M. Kinoshita, National Defense Medical College Japan

Rapid high through-put diagnostic triage after a mass radiation exposure event using early gene expression changes

M. Abend, Bundeswehr Institute of Radiobiology, Germany

Circulating Cell-Free DNA (cfDNA) Correlates with integral dose and identifies radiotherapy patients who develop gastrointestinal toxicity

P. Okunieff, University of Florida, USA

Assessment of the radiological effects from a “dirty bomb” scenario in urban areas on a metrological microscale

H. Walter, Bundesamt für Strahlenschutz, Germany

MSC-derived extracellular vesicles: New emergency treatment to limit the development of radiation-induced hematopoietic syndrome?

D. Riccobono, French Armed Forces Biomedical Research Institute, France

Session Radiation protection

Misuse of a medical isotope: Playing cards contaminated with I-125, German experience

E. Kröger, Bundesamt für Strahlenschutz, Germany

Biodosimetry and biosimetry networks for managing radiation emergency

U. Oestreicher, Bundesamt für Strahlenschutz, Germany

Biodosimetry of internalized irradiation exposures using transcriptional analysis from relapsed and refractory neuroblastoma patients from a NANT11-01 study treated with 131I-MIBG

M. Coleman, Lawrence Livermore National Laboratory, USA

Imidazolyl ethanamide pentandionic acid for the treatment of acute radiation syndrome

M. Czajkowski, Myelo Therapeutics GmbH, Germany

Radiation risks of medical exposure in Russia: current status of the problem within international and national standards

V. Kashcheev, A.Tsyb Medical Radiological Research Center (MRRC), Russia

Session Radiation accident management

SEED, a deployable numerical dosimetric reconstruction tool

F. Entine, French defense radiation protection service, France

Metrology for mobile detection of ionising radiation: The EMIR project 16ENV04 "Preparedness"

S. Neumaier, Physikalisch-Technische Bundesanstalt, Germany

The accuracy of biological dose reconstruction in case of criticality accident

E. Gregoire, Institut de Radioprotection et de Sécurité Nucléaire, France

Radiation exposure biomarkers in the practice of the medical radiology: Cooperative research and the role of the International Atomic Energy Agency (IAEA) biodosimetry/radiobiology laboratory

O. Belyakov, International Atomic Energy Agency, Austria

Poster presentation in the poster exhibition

Session Radiation emergency medical preparedness and response

Testing of the United States Navy nuclear accident dosimeters

A. Romanyukha, U.S. Navy, USA

Update on AFRRRI's cytogenetic Biodosimetry activities – enhancement of throughput

W. Blakely, Uniformed Services University/Armed Forces Radiobiology Research Institute (AFRRRI), USA

Comparative effectiveness of biomarkers: Expanding a framework to include organ-specific predictions of Injury

A. Flood, Dartmouth Medical School, USA

Resolution of homogeneity and dose distribution under emergency conditions using Electron Paramagnetic Resonance (EPR) measurements of finger/toe nails in vivo

H. Swartz, Geisel College of Medicine at Dartmouth & Clin-EPR, LLC, USA

The STORE database; a platform for data and resource sharing in radiation biology, radioecology and epidemiology

P. Schofield, University of Cambridge, United Kingdom

Natural history of disease progression in a rabbit model of acute radiation sickness following total body irradiation

I. Jackson, University of Maryland School of Medicine, USA

Developing entolimod, a TLR5 agonist, as a medical countermeasure against acute radiation syndrome

V. Krivokrysenko, Cleveland BioLabs, Inc., USA

Development of a METREPOL-based response category (RC) algorithm for H-ARS severity triage in a baboon radiation model involving gamma ray and mixed-field (i.e., 5.5 neutron to gamma ray) exposures

D. Bolduc, Uniformed Services University/Armed Forces Radiobiology Research Institute (AFRRRI), USA

Free time to explore Munich, suggestions and flyer available at the conference office

Thursday, 16.05.2019

Session Radiation health effects and medical countermeasures II

Plasma proteins as new biomarkers of irradiation in humans

A. Tichy, University of Defence, Faculty of Military Health Sciences, Czech Republic

Molecular markers of occupational exposure at area contaminated area after radiation accident

D. Bazyka, National Research Center for Radiation Medicine of the National Academy of Medical Sciences of Ukraine, Ukraine

Cataract type and magnitude in mouse is highly dependent on dose and age at irradiation

D. Pawliczek, Helmholtz Zentrum München, Germany

Biomarkers for assessing radiation injury identified using the nonhuman primate model

V. Singh, Uniformed Services University/Armed Forces Radiobiology Research Institute (AFRRI), USA

Radiation-induced cardiovascular disease: 10 years lessons learned from heart proteome analyses

O. Azimzadeh, Helmholtz Zentrum München, Germany

Diagnostic performance of 68Gallium-PSMA PET/CT in a large cohort of patients with biochemical recurrence of prostate carcinoma

M. Hoffmann, Bundeswehr Medical Service Headquarters, Germany

Session Effects of electromagnetic fields

Examining cell proliferation and differentiation in primary human dermal fibroblasts to ensure EMF exposure experiments under comparable condition

V. Franchini, Scientific Department of Army Medical Center, Italy

Precise and Reproducible SAR-Dosimetry for Electromagnetic Field Exposure Tests

R. Hollan, Universität der Bundeswehr Hamburg, Germany

Session Effects of low dose ionizing radiation

Genomic instability and DNA-repair predicting radiosensitivity?

C. Streffer, University Medicine Essen, Germany

Identification of an epigenomic signature of mixed field neutrons at very low doses

A. Miller, Uniformed Services University/Armed Forces Radiobiology Research Institute (AFRRI), USA

Risk assessment in Siberian group of chemical enterprises personnel

R. Takhaov, Seversk Biophysical Research Center of the Russian Federal Medical and Biological Agency, Russia

Low dose irradiation by low and high LET emitters discriminated by DNA damage geometry

H. Scherthan, Bundeswehr Institute of Radiobiology, Germany

Molecular imaging for longitudinal in vivo prediction of cell death and tissue regeneration after exposure to ionizing radiation

A. Blaeske, Department of Nuclear Medicine, LMU Munich, Germany

Session Radiation risk perception of the public/External exposure assessment

Advanced CT-protocols in clinical routine: CTA-Subtraction-Technique in detection of pulmonary embolism. A benefit for patients or only an increase in dose?

K. Nestler, Department for Radiology and Neuroradiology, Bundeswehr Central Hospital, Koblenz, Germany

Reevaluation of the dose effect curve from low to high doses using the standard micronuclei technique in association with a telomere/centromere FISH staining

C. Herate, CEA, France

Session Radiation Biology/Radiation Physics II

Using mRNA and small RNA gene expression changes in the peripheral blood for easy detection of Ra-223 incorporation

P. Ostheim, Bundeswehr Institute of Radiobiology, Germany

Accident with a Se-75 source

V. Kaufmann and P. Adler, NucTecSolutions GmbH, Germany

Protecting skin keratinocytes from ionizing radiation with Bardoxolone-methyl

C. Hermann, Bundeswehr Institute of Radiobiology, Germany
