

5th European Radiation Protection Week and EURAMED Rocc-n-Roll Project Workshops

Vienna, Austria, 22–24 Nov 2021



CONFERENCE PROGRAMME

Organised by the
European Alliance for Medical Radiation Protection Research (EURAMED)

Streamed on ESR Connect

Mon 22 Nov														
9:00 – 9:45	<p><u>Opening session</u> <i>Opening Remarks</i> Hoeschen, Christoph (EURAMED) <i>The Importance of MEENAS in the European Radiation Protection Research and Innovation Scene</i> Vandenhove, Hildegarde (SCK CEN, Belgium)</p>													
9:45 – 11:15	 <p>Lessons Learned by European RP Platforms from Large-Scale Accidents <u>Invited scientific session I</u> Roundtable discussion (10 min presentation each, 30 min discussion):</p> <table border="0"> <tr> <td>ALLIANCE</td> <td>Vandenhove, Hildegarde (SCK CEN)</td> </tr> <tr> <td>EURADOS</td> <td>López, María Antonia (CIEMAT)</td> </tr> <tr> <td>EURAMED</td> <td>Lassmann, Michael (University of Würzburg)</td> </tr> <tr> <td>MELODI</td> <td>Cardis, Elisabeth (ISGlobal)</td> </tr> <tr> <td>NERIS</td> <td>Isnard, Olivier (IRSN)</td> </tr> <tr> <td>SHARE</td> <td>Perko, Tanja (SCK CEN)</td> </tr> </table>	ALLIANCE	Vandenhove, Hildegarde (SCK CEN)	EURADOS	López, María Antonia (CIEMAT)	EURAMED	Lassmann, Michael (University of Würzburg)	MELODI	Cardis, Elisabeth (ISGlobal)	NERIS	Isnard, Olivier (IRSN)	SHARE	Perko, Tanja (SCK CEN)	<p>Chairs: Almudena Real (ALLIANCE), Pascal Croüail (NERIS) & Rick Tanner (EURADOS)</p>
ALLIANCE	Vandenhove, Hildegarde (SCK CEN)													
EURADOS	López, María Antonia (CIEMAT)													
EURAMED	Lassmann, Michael (University of Würzburg)													
MELODI	Cardis, Elisabeth (ISGlobal)													
NERIS	Isnard, Olivier (IRSN)													
SHARE	Perko, Tanja (SCK CEN)													
11:15 – 11:30	Coffee break													
11:30 – 13:00	<p>Radioecology and Emergency Preparedness Parallel abstract session A (Channel 1) <i>Modelling the Transfer of ¹³⁷Cs along a River–Sea Continuum and Application to Accidental Release Scenarios</i> Radakovitch, Olivier (IRSN, France) <i>Spatial Clustering of Contaminated Agricultural Parcels for Efficient Remediation in a Post-Accident Situation</i> Abrams, Floris (SCK CEN, Belgium)</p>	<p>Chairs: Rodolphe Gilbin (ALLIANCE) & Deborah Oughton (NERIS)</p>												

	<p><i>The Ecotoxicology of Tritium: Effects on Fish Using Several Endpoints, from Molecule to Individual Responses</i> Gagnaire, Béatrice (IRSN, France)</p> <p><i>Ionising Radiation, Genotoxic Stress, and Mitochondrial DNA Copy-Number Variation in Caenorhabditis Elegans: Droplet Digital PCR Analysis</i> Maremonti, Erica (NMBU/CERAD, Norway)</p> <p><i>Training Researchers in Operational Radiation Protection: An Opportunity for Dialogue and Optimization</i> Clarijs, Tom (SCK CEN, Belgium)</p> <p><i>Radiation Protection and Climate Change: How Do the Dose Response Models Influence the Choices of Solutions to Mitigate Climate Problems</i> Vasilache, Radu (Canberra Packard SRL, Romania)</p> <p><i>Identification and Prioritisation of ALLIANCE SRA Topics Relevant to Medical Radiation Protection Research</i> Vives i Battlle, Jordi (SCK CEN, Belgium)</p>	
11:30 – 13:00	<p>Dosimetry in the Medical Context Parallel abstract session B (Channel 2)</p> <p><i>MEDIRAD - Implications of Medical Low-Dose Exposure</i> Frija, Guy (University of Paris, France)</p> <p><i>ICRP Approach to Determining Reference Organ and Effective Dose Coefficients for Common X Ray Imaging Examinations</i> Sutton, David (University of Dundee, United Kingdom)</p> <p><i>Effectiveness of Five Radioprotective Devices for Staff during Fluoroscopically Guided Procedures: Recommendations from the MEDIRAD Project</i> Dabin, Jérémie (SCK CEN, Belgium)</p> <p><i>The Translational Challenge for Medical Radiation Applications and Protection Research: Methodological Approach and Preliminary Results</i> Bockhold, Sophie (University College Dublin, Ireland)</p> <p><i>Inter- and Intra-Individual Variability of Gamma-H2AX in Healthy Volunteers and Clinical Radiotherapy Patients</i> Barnard, Stephen (UK Health Security Agency)</p> <p><i>Extremity and Whole-Body Dose Monitoring of Staff with Thermoluminescent and Real-Time Detectors during Treatments of Neuroendocrine Tumours with ¹⁷⁷Lu-Dotatate (Luthatera)</i> Riveira Martin, Mercedes (Galicia Sur Health Research Institute, Spain)</p> <p><i>Assessment of Blind Scan in Chest CT Examinations</i> Bosmans, Hilde (University Hospitals Leuven, Belgium)</p>	<p>Chairs: Veronika Olšovcová (EURADOS) & Klaus Bacher (EURAMED)</p>
13:00 – 13:30	Lunch break	
13:30 – 17:00	EURAMED rocc-n-roll workshop on the Strategic Research Agenda for Medical Applications of Ionising Radiation (WP6 workshop)*	

* This project has received funding from the Euratom Research and Training Programme 2019–2020 under grant agreement No. 899995.

Tue 23 Nov		
9:00 – 10:30	<p>Challenges in Research on Individual Radiosensitivity and Susceptibility Invited scientific session II</p> <p><i>Cellular and Extracellular Mechanisms of Radiation Sensitivity and Radiosusceptibility</i> Lumniczky, Katalin (National Public Health Centre, Hungary)</p> <p><i>Radiation-Induced Nucleoshuttling of the ATM Protein and the Differences between Radiosensitivity and Radiosusceptibility</i> Foray, Nicolas (INSERM, France)</p> <p><i>Radiotherapy Toxicity and Radiogenomics</i> West, Catharine (University of Manchester, United Kingdom)</p>	<p>Chairs: Klaus Bacher (EURAMED) & Jean-Michel Dolo (MELODI)</p>
10:30 – 10:45	Coffee break	
10:45 – 12:15	<p>Low-Dose Research Parallel abstract session C (Channel 1)</p> <p><i>Dose-Responses for Mortality from Cerebrovascular and Heart Diseases in Atomic Bomb Survivors: 1950–2003</i> Schöllnberger, Helmut (Helmholtz Zentrum Munich, Germany)</p> <p><i>Concurrent Live-Cell Imaging of DNA Double-Strand Break Repair and its Cell-Cycle Status: From Cells to Animal Models</i> Otsuka, Kensuke (CRIEPI, Japan)</p> <p><i>Bone-Marrow-Derived Extracellular Vesicles Influence Radiation-Induced Leukemogenesis</i> Lumniczky, Katalin (National Public Health Centre, Hungary)</p> <p><i>A Mathematical Model for Analyzing the Effects of Protracted Irradiation on Cancer and Lifespan in Mice</i> Kinugawa, Tetsuhiro (Osaka University, Japan)</p> <p><i>Effect of Caesium-137 Chronic Low-Dose Exposure on Neovascularization Process</i> Ebrahimian, Teni (IRSN, France)</p> <p><i>The HARMONIC Project: Epidemiological Study for the Assessment of Radiation Doses and Associated Cancer Risks Following Cardiac Fluoroscopy in Childhood</i> Bernier, Marie-Odile (IRSN, France)</p> <p><i>The Effect of Low- and High-Dose Rate Brachytherapy on the Immune Phenotype of Prostate Cancer Patients</i> Balázs, Katalin (National Public Health Centre, Hungary)</p>	<p>Chairs: Ulrike Kulka & Jean-Michel Dolo (MELODI)</p>

10:45 – 12:15	General Dosimetry and Various Topics Parallel abstract session D (Channel 2)	Chairs: Rick Tanner (EURADOS) & Pascal Croüail (NERIS)
	<i>Fragmentation Cross-Sections Study of High-Energy ²⁰Ne Ion for Radiation Shielding and Radiotherapy Purposes</i> Sangwan, Nitika (NIT Kurukshetra, India)	
	<i>Childhood CT Scans and Cancer Risks Estimates: An Update of the French CT Cohort Study</i> Foucault, Anaïs (IRSN, France)	
	<i>Determination of Diagnostic Reference Levels and Achievable Doses for Pediatric CT Examinations in the United States and Comparison with International Benchmarks</i> Frush, Donald (Duke University, United States)	
	<i>Assessment of Uncertainties Affecting Dosimetric Calculations for the Intake of Radon and NORM</i> Makumbi, Thomas (Karlsruhe Institute of Technology, Germany)	
	<i>Novel Detector for Monitoring Airborne Radioactivity and Fallout during a Nuclear Emergency</i> Ihantola, Sakari (STUK, Finland)	
	<i>Radio-Biologically Motivated Modeling of Radiation Risks of Mortality from Ischemic Heart Diseases in the Canadian Fluoroscopy Cohort Study</i> Schöllnberger, Helmut (Helmholtz Zentrum Munich, Germany)	
	<i>Radiation Protection of Volunteers in Medical Research – A Multifaceted Challenge</i> Almén, Anja (Swedish Radiation Safety Authority, Sweden)	
12:15 – 13:30	Lunch break	
13:30 – 16:00	EURAMED Rocc-n-Roll Workshop on the Health Perspective and Risk Benefit Approach (WP3 Workshop)*	
13:30 – 16:00	MELODI/ALLIANCE Online Workshop on Adverse Outcome Pathways (AOP) Topics Workshop will take place via Teams Click this link to view the schedule	

* This project has received funding from the Euratom Research and Training Programme 2019–2020 under grant agreement No. 899995.

Wed 24 Nov		
9:00 – 10:30	<p>Envisioning the Future of Radiation Protection Research: Big Data, AI and Beyond <u>Invited scientific session III</u></p> <p><i>Machine Learning in Radiation Oncology: Opportunities and Needs</i> Brouwer, Charlotte (UMC Groningen, Netherlands)</p> <p><i>The Impact of the General Data Protection Regulation on Artificial Intelligence</i> Sartor, Giovanni (European University Institute, Italy)</p> <p><i>Ethics, Robotics and Medicine Development</i> Rogozea, Liliana (Transilvania University of Braşov, Romania)</p> <p><i>Ethics in Radiological Protection for Medical Diagnosis and Treatment, ICRP TG109</i> Cantone, Marie Claire (University of Milan, Italy)</p>	<p>Chairs: Christoph Hoeschen (EURAMED) & Yevgeniya Tomkiv (SHARE)</p>
10:30 – 10:45	Coffee break	
10:45 – 12:15	<p>Medical Radiation Protection <u>Abstract session E</u></p> <p><i>Cell-Type Specific Differences in the Competitive Relationship between Cell Killing and Accumulation of Carcinogenic DNA Lesions Following Fractionated Radiation Exposure</i> Akuwudike, Pamela (Stockholm University, Sweden)</p> <p><i>Differences of Ex Vivo and In Vivo DSB Repair Capacity in PBMCs of Patients before and during Radioiodine Therapy</i> Eberlein, Uta (University of Würzburg, Germany)</p> <p><i>Structural Differences in Tumor and Ablated Tumor Tissue by Measuring Noise Performance Using Artificial Intelligence Method</i> Mahmoodian, Naghmeh (Otto von Guericke University Magdeburg, Germany)</p> <p><i>Accurate Estimation of Organ Doses from Chest CT Using Patient-Specific Dosimetry</i> Damilakis, John (University of Crete, Greece)</p> <p><i>Interpretation of Radiation Induced Aging Based on a Mathematical Model</i> Wada, Takahiro (Kansai University, Japan)</p> <p><i>Status of the Implementation of the Requirements of the Basic Safety Standards Directive at National Level Regarding Education & Training in Radiation Protection: Results from EURAMED Rocc-n-Roll Project</i> Paulo, Graciano (Coimbra Health School, Portugal)</p>	<p>Chairs: Christoph Hoeschen (EURAMED) & Yevgeniya Tomkiv (SHARE)</p>

	<i>Early Subclinical Cardiovascular Changes after Radiotherapy for Breast Cancer Detected by Echocardiography: Contribution of the MEDIRAD EARLY-HEART Cohort</i> Locquet, Médéa (IRSN, France)	
12:15 – 13:15	Lunch break	
13:15 – 14:00	Digital poster session and discussion *	Chairs: Pedro Nogueira (ALLIANCE) & Veronika Olšovcová (EURADOS)
14:00 – 14:30	<u>Awards ceremony</u> Introduction 1 st MELODI award lecture 2 nd MELODI award lecture EURAMED award lecture Presentation of awards	Chairs: Simon Bouffler (MELODI) & Christoph Hoeschen (EURAMED)
14:30 – 14:45	Closing	
15:30 – 17:00	EURAMED General Assembly (for EURAMED members only)	

*** Posters to be presented**

Salivary Dysfunctions after Radioiodine Treatment (START): Results of a Self-Controlled Study in France

Baudin, Clémence (IRSN, France)

RadoNorm: Towards Effective Radiation Protection Based on Improved Scientific Evidence and Social Considerations – Focus on Radon and NORM

Birschwilks, Mandy (BfS, Germany)

Continuous Education and Training through a Dose Management Platform

Bosmans, Hilde (University Hospitals Leuven, Belgium)

Cancer-Related Changes in Cells Exposed to Alpha Radiation in Combination with Nicotine

Boroumand, Nadia (Stockholm University, Sweden)

Physiologically Based Pharmacokinetic Modelling for Novel Radiopharmaceuticals Using a Multilevel Object-Oriented Modelling Methodology

Bouwman, Ramona (NRG, Netherlands)

Dose Variations Using an X Ray Cabinet to Establish Calibration Curves for Biological Dosimetry Techniques

Bucher, Martin (BfS, Germany)

An Innovative Curriculum Model to Boost the Number of Medical Physicists and Radiation Protection Experts in Medical Radiation

Caruana, Carmel (University of Malta, Malta)

Response of Current Environmental Dosemeters to New Operational Quantities

Čemusová, Zina (National Radiation Protection Institute, Czechia)

Neutrophil Infiltration in Radiation-Induced Cardiovascular Inflammation

Choi, You Yeon (National Radiation Emergency Medical Centre, Republic of Korea)

Optimization Process in Radiotherapy (OPRORA) Project: Dosimetry Audit on VMAT and IMRT for Prostate and Head and Neck Treatment

Della Monaca, Sara (National Institute of Health, Italy)

Effect of Antioxidant rA1M on Expression of Apoptosis and Oxidative Stress Related Genes during ¹⁷⁷Lu-Octreotate Treatment of GOT1 Neuroendocrine Tumours

Dello, Nishte (University of Gothenburg, Sweden)

The Questionnaire on GDPR Compliance Developed in the Framework of MEDIRAD Project: Results

Dini, Valentina (National Institute of Health, Italy)

Typical Effective Dose Values in Nuclear Medicine Single Photon Emission Imaging in Croatia

Dundara Debeljuh, Dea (University Hospital Rijeka, Croatia)

Inter-Laboratory Comparison (2021) on the Dicentric Chromosome Assay in the Frame of the European Network of Biological and Physical Retrospective Dosimetry (RENEB)

Endesfelder, David (BfS, Germany)

Effects of Low-Dose γ Radiation on Atherosclerosis in Apoe(-/-) Mice: Study of Short-Term Effects on Macrophage Polarization and Evaluation of Long-Term Phenotypical and Immunological Effects in the Atherosclerotic Plaque

Garali Zineddine, Imène (IRSN, France)

European Federation of Organisation for Medical Physics (EFOMP) Perspective on the Current Role and Future Direction of the Physical Scientist as a Medical Physics and Radiation Protection Expert

Gilligan, Paddy (EFOMP)

Optimisation Process in Radiotherapy Project: Clinical Audit on VMAT and IMRT for Prostate and Head & Neck Treatment

Grande, Sveva (National Institute of Health, Italy)

Breast Cancer Radiotherapy and the Risk of Acute Coronary Events – Insights from a Process Oriented Model

Kaiser, Jan Christian (Helmholtz Zentrum Munich, Germany)

The European Metrology Network for Radiation Protection: Benefits and Challenges

Khanbabae, Behnam (PTB, Germany)

Methodologies Used for the Optimisation of Radiation Doses Applied in Stereotactic Radiosurgery of a Brain Tumour

Kobalia, Natia (Georgian Technical University, Georgia)

Radiological Component of the Exposome, Multiple Exposures, Risks of Cancer and Other Chronic Diseases in the Constances Cohort (CORALE)

Laurent, Olivier (IRSN, France)

Cytogenetic Biodosimetry Intercomparison Exercises among Laboratories in South Korea

Lee, Yang Hee (KIRAMS, Republic of Korea)

Cytogenetic Aberrations after Partial-Body Irradiation during Fractionated Radiotherapy

Lee, Younghyun (KIRAMS, Republic of Korea)

Cellular and Gene Expression Changes in VH10 and AHH-1 Cells after Chronic and Acute Exposure to Low Doses of Low, High and Mixed LET Ionising Radiation

López Riego, Milagrosa (Stockholm University, Sweden)

Managing Patients in High-Dose Procedures at Centro Hospitalar Universitário do Porto

Machado, Cláudia (University of Porto Central Hospital, Portugal)

Occupational Radiation Exposure in Chemoembolizations: Evaluation of Doses in Different Body Regions of Professionals

Machado, Cláudia (University of Porto Central Hospital, Portugal)

QuADRANT: Constant Improvement through Clinical Audit in Radiology, Radiotherapy and Nuclear Medicine – An ESR-Led Project on Behalf of the European Commission

Mahmood, Nadia (Brighton and Sussex NHS Trust, United Kingdom)

The Current Status of Uptake of European Basic Safety Standard (2013/59/Euratom) Requirements: Results of a Follow-Up Survey in European Radiology Departments

Mahmood, Nadia (Brighton and Sussex NHS Trust, United Kingdom)

Deposition of Ionising Energy Leads to Population Decline via Impaired Meiosis in Caenorhabditis Elegans

Maremonti, Erica (NMBU/CERAD, Norway)

Comprehensive Reporting Solution with Integrated Radiation Dose and Quality Analysis

Mildenberger, Peter (UMC Mainz, Germany)

Your Occupational Dose in Your Pocket: Helping to Know Personal Occupational Doses to Improve the Interventional Practices

Sánchez, Roberto (Hospital Clinic San Carlos, Spain)

Investigation of Monolithic and Pixelated Detectors and Two-Layer Geometry for Hemispheric PET Systems: A Simulation Study

Scheiff, Knuth (Otto von Guericke University Magdeburg, Germany)

Effects of rA1M on the Regulation of Apoptotic Related Genes in Kidney Medulla after ¹⁷⁷Lu-Octreotate Injection in Mice

Simonsson, Klara (University of Gothenburg, Sweden)

The Cytokinesis-Block Micronucleus Assay on Human Cryopreserved Whole Blood and Isolated Peripheral Blood Mononuclear Cells

Sioen, Simon (University of Ghent, Belgium)

Characteristics of Complete Blood Cell Count among Radiation Workers in South Korea (2014–2019)

Sung, Hyoju (KIRAMS, Republic of Korea)

SHARE – European Platform for Social Sciences and Humanities in Ionising Radiation Research

Tomkiv, Yevgeniya (SHARE)

Prediction of Changes in the Frequency of Chromosome Aberrations in Peripheral Blood Lymphocytes after Radiotherapy

Tsunoyama, Yuichi (Kyoto University, Japan)

Proposal of New Model Including Proliferation and Irradiation for Cancer Therapy

Tsunoyama, Yuichi (Kyoto University, Japan)

A Study Using a Mathematical Model on the Radiation Damage Suppression Effect by Stem Cell Competition

Uchinomiya, Kouki (CRIEPI, Japan)

Investigation on Coastal Sand as a Fortuitous Dosimeter by Optically Stimulated Luminescence

Vidotto, Monica (Ruđer Bošković Institute, Croatia)

13:30 – 16:00	MELODI/ALLIANCE Online Workshop on AOP Topics	Chairs: Vinita Chauhan (Health Canada) & Dmitry Klokov (IRSN)
	<i>AOP: A Path towards Better Data Consolidation and Global Co-ordination of Radiation Research</i> Chauhan, Vinita (Health Canada, Canada)	
	<i>Advancing the AOP in Radiation Research: A HORIZON-Style Exercise</i> Burt, Julie (CNSC, Canada)	
	<i>Highlights of the MELODI/ALLIANCE International Workshop on AOPs, April 12–14 2021</i> Klokov, Dmitry (IRSN, France)	
	<i>Development of an AOP to Radiation-Induced Leukemia</i> Klokov, Dmitry (IRSN, France)	
	<i>Development of an AOP to Cardiovascular Disease</i> Azimzadeh, Omid (BfS, Germany) Chauhan, Vinita (Health Canada, Canada)	
	<i>Development of Consensus AOPs for Radiation-Induced Reproductive Effects</i> Tollefsen, Knut Erik (NIVA/NMBU, Norway)	
	<i>Developmental Neurotoxicity of Ionising Radiations, an AOP Perspective</i> Armant, Olivier (IRSN, France)	
	<i>Round Table/Open Discussion with Panelists</i> Moderators: Vinita Chauhan (Health Canada) Dmitry Klokov (IRSN, France)	
	<i>Closing Remarks</i> Chauhan, Vinita (Health Canada, Canada) Klokov, Dmitry (IRSN, France)	