

MELODI 7th Workshop, 9 – 11 November 2015 **Next Generation Radiation Protection Research**

Helmholtz Zentrum München, Ingolstädter Landstr. 1, Neuherberg, Germany

Programme

Monday, 9 November 2015

Session 1: Radiation Protection Research in Europe Chair: **Peter Jacob**, Helmholtz Zentrum München, Germany Building 23, Auditorium

13.30 **Nikolaus Blum**, Administrative Director, Helmholtz Zentrum München, Germany

Rita Lecbychova, Head of Unit in charge of Fission Energy

Directorate General for Research and Innovation, European Commission, Belgium:
"Integrating radiation protection research at EU level"

Axel Böttger, Head of Division RS II 2 - Fundamental Aspects of Radiological Protection,
Federal Ministry for the Environment, Nature Conservation, Building and Reactor Safety,
Germany:

"Expectations in MELODI from the German regulatory authority"

Wilfried Kraus, Director, Directorate Sustainability, Climate and Energy, Federal Ministry
of Education and Research, Germany:

*„Maintaining and enhancing competence in radiation protection – The German radiation
research initiative"*

Werner Rühm, Scientific Secretary, ICRP Committee 1, Helmholtz Zentrum München,
Germany: *"Scientific Needs of ICRP for the Next Generation of Radiation Protection"*

Jacques Repussard, Chair of MELODI, Institut de Radioprotection et de Sûreté Nucléaire,
France

Thomas Jung, Head of Department of Radiation Protection and Health, Federal Office of
Radiation Protection, Germany:

"CONCERT - Joint programming to advance radiation protection research in Europe"

15.00 Coffee and tea

Session 2: Low-Dose Radiation Research: Where are we?

Chair: **Jacques Repussard**, Institut de Radioprotection et de Sûreté Nucléaire, France
Building 23, Auditorium

15.30 **Sisko Salomaa**, STUK – Radiation and Nuclear Safety Authority, Finland: *DoReMi*

15.55 **Simon Bouffler**, Public Health England, UK: *RISK-IR*

16.20 **Peter Jacob**, Helmholtz Zentrum München, Germany: *EpiRadBio*

16.45 **John Harrison**, Public Health England, UK: *SOLO*

17.05 Break

Public Lecture

Building 23, Auditorium

17.15 Chair: **Mats Harms-Ringdahl**, Stockholm Universitet, Sweden
Pieter Monsieurs, Belgian Nuclear Research Centre, Belgium:
Next Generation Sequencing

18.30 Get together (Building 54, Canteen)

Tuesday, 10 November 2015

Session 2: Low-Dose Radiation Research: Where are we? (continued)

Chair: **Jacques Repussard**, Institut de Radioprotection et de Sûreté Nucléaire, France
Building 23, Auditorium

- 09.00 **Andrea Ottolenghi**, University Pavia, Italy: *ANDANTE*
09.20 **Mike Atkinson**, Helmholtz Zentrum München, Germany: *PROCARDIO*
09.40 **Rafi Benotmane**, Belgian Nuclear Research Centre, Belgium: *CEREBRAD*
10.00 **Ausrele Kesminiene**, International Agency for Research on Cancer, France: *EPI-CT*

10.20 Coffee and tea

Session 3: Low-dose risk

Chair: **Sisko Salomaa**, Säteilyturvakeskus, Finland
Building 23, Auditorium

- 10.50 **Horst Zitzelsberger**, Helmholtz Zentrum München, Germany:
Molecular landscape of papillary thyroid carcinomas from the UkrAm cohort and modelling of carcinogenesis
11.20 **Roy Shore**, Radiation Effects Research Foundation, Japan: *Radiation risk inference at low dose and low dose rate exposure for radiological protection purposes*
11.50 Tatjana Paunesku, Northwestern University, IL, USA:
Large-scale animal studies for evaluation of dose and dose rate responses
12.05 Helmut Schöllnberger, Helmholtz Zentrum München, Germany:
Dose-responses for cerebrovascular and heart disease in atomic bomb survivors – an analysis involving multi-model inference techniques
12.20 Dominique Laurier on behalf of the INWORKS consortium. University of North Carolina, NC, USA: *Risk of cancer mortality in an international study of nuclear workers (INWORKS)*

12.35 Lunch and Poster Session A

Building 3532, Rooms 1050 and 1051

Session 4: Factors affecting individual risk

Chair: **Richard Wakeford**, University of Manchester, UK
Building 23, Auditorium

- 14.00 **Dominique Laurier** on behalf of the INWORKS consortium. Institut de Radioprotection et de Sûreté Nucléaire, France: *Risk of leukaemia, lymphoma, and multiple myeloma in an international study of nuclear workers (INWORKS)*
- 14.30 **Markus Eidemüller**, Helmholtz Zentrum München, Germany:
Individual risk factors for breast cancer and risk transfer among populations
- 15.00 **Aleksandra Fucic**, Institute for Medical Research and Occupational Health, Zagreb, Croatia:
Acentric fragments are associated with cancer risk in subjects occupationally or accidentally exposed to ionizing radiation: Re-analysis of a large European pooled cohort
- 15.15 **Hanane Derradji**, Belgian Nuclear Research Centre, Belgium:
Changes induced by radiation and iodine deficiency in thyroid cells

Session 5: ALLIANCE-MELODI cross cutting themes

Chair: **Hildegard Vandenhove**, Studiecentrum voor Kernenergie -Centre d'Étude de l'énergie Nucléaire, Belgium
Building 33, Großer Hörsaal

- 14.00 **Béatrice Gagnaire**, Institut de Radioprotection et de Sûreté Nucléaire, France:
Biomarkers of exposure and effects: Are they useful tools to understand radiation sensitivity in living organisms?
- 14.20 **Karim Fahmy**, Helmholtz-Zentrum Dresden-Rossendorf, Germany: *Metabolic heat: an in vivo signature of low dose radiation sensitivity*
- 14.40 **Nele Horemans**, Belgian Nuclear Research Centre, Belgium: *Studying response of plants to radiation using biomarkers of different levels of biological complexity*
- 15.00 **Maria Antonella Tabocchini** on behalf of the Cosmic Silence collaboration. Istituto Superiore di Sanità and INFN Roma1-Gr.coll.Sanità, Roma, Italy:
The cosmic silence experiment: investigation of the molecular mechanisms involved in the biological response of living systems to environmental radiation
- 15.15 **Hans-Christian Teien**, Centre for Environmental Radioactivity, Norway:
Gamma radiation affects gene expression in early life stages of Atlantic salmon

15.30 Break

Session 6: New biology

Chair: **Andrzej Wojcik**, Stockholm Universitet, Sweden
Building 23, Auditorium

- 16.00 **Munira Kadhim**, Brookes University, UK:
Role of micro vesicles in non-targeted effects of radiation
- 16.30 **Laure Sabatier**, Commissariat à l'énergie atomique et aux énergies alternatives, France:
Telomere length distributions in members of radio-epidemiological cohorts
- 17.00 **S. Constantino Rosa Santos**, Centro Cardiovascular da Universidade de Lisboa and
Universidade de Lisboa, Portugal: *Low doses of ionizing radiation enhance angiogenesis*
- 17.15 **Ann-K Olsen**, Norwegian Institute of Public Health, Norway: *Global gene expression and
DNA methylation in testicular mouse cells after chronic exposure to continuous low dose
rate gamma irradiation and Selenium deficiency*

Session 7: EURADOS-MELODI cross cutting themes

Chair: **Filip Vanhavere**, Belgian Nuclear Research Centre, Belgium
Building 33, Großer Hörsaal

- 16.00 **Eric Blanchardon**, Institut de Radioprotection et de Sûreté Nucléaire, France:
Dose reconstruction in the CURE project for workers exposed to uranium
- 16.30 **Marina Degteva**, Southern Urals Biophysical Institute, Russia:
*Dose reconstruction in the SOLO project for Mayak workers and former residents of the
Techa River area*
- 17.00 **E. Schmitt**, Helmholtz Zentrum München, Germany:
PARTRAC – Recent developments towards medical applications
- 17.15 **Roger Harrison** on behalf of EURADOS WG9:
Out-of-field dosimetry in radiotherapy for input to epidemiological studies

19.30 Workshop dinner

Wednesday, 11 November 2015

Session 8: Infrastructures, education and training

Chair: **Mike Atkinson**, Helmholtz Zentrum München, Germany
Building 23, Auditorium

- 09.00 **Vere Smyth**, University Pavia, Italy: *Education and training*
- 09.30 **Laure Sabatier**, Commissariat à l'énergie atomique et aux énergies alternatives, France:
Short introduction to the topic 'Infrastructures'
- 09.35 **NN**, Helmholtz Zentrum München, Germany: The Intrafrontier Research Infrastructure
- 10.00 **U. Kulka**, on behalf of the RENEb consortium. Bundesamt fuer Strahlenschutz, Germany:
RENEb – The Future
- 10.15 **Siamak Haghdooost**, Stockholm University, Sweden:
Setups for exposing cells and animals to gamma radiation at low and high dose rate and to mixed beams of low and high LET radiation

Session 9: NERIS-MELODI cross cutting themes

Chair: **Thierry Schneider**, Nuclear Evaluation Protection Centre (CEPN), France
Building 33, Großer Hörsaal

- 09.00 **Wolfgang Weiss**, Freiburg, Germany:
Thyroid cancer surveys after nuclear emergencies
- 09.25 **Jean-René Jourdain**, Institut de Radioprotection et de Sûreté Nucléaire, France:
PRIODAC, a project to determine the modalities and side effects of multiple administrations of stable iodine to protect people chronically exposed to radioactive iodine
- 09.50 **Wolfgang Raskob**, Karlsruhe Institute of Technology, Germany:
Integration of iodine tablet distribution into countermeasures strategies
- 10.15 **F. Gering**, German Federal Office for Radiation Protection, Oberschleißheim, Germany:
Recent developments regarding iodine thyroid blocking in Switzerland and Germany

10.30 Break

Session 10: Radiation effects on stem cells

Chair: **Jean-René Jourdain**, Institut de Radioprotection et de Sûreté Nucléaire
Building 23, Auditorium

- 11.00 **Kevin Prise**, University Belfast, UK:
Breast stem cells and radiation
- 11.30 **Umberto Galderisi**, Seconda Università di Napoli, Italy: *Functions and secretome activity of human mesenchymal stem cells are affected by low dose radiation treatment*
- 12.00 **Rhona M. Anderson**, Medical Research Council, UK. ²Brunel University London, UK:
 α -particle-induced complex chromosome exchanges transmitted through extra-thymic lymphopoiesis in vitro
- 12.15 **Nynke Hoper**, University of Groningen, The Netherlands:
Radiation induced carcinogenesis of thyroid gland stem cells

Session 11: Medical-MELODI cross cutting themes

Chair: **Guy Frija**, European Georges Pompidou Hospital, France
Building 33, Großer Hörsaal

- 11.00 **R Tamarat**, Institute for Radioprotection and Nuclear Safety, France:
Circulating microparticles associate to severe radiation proctitis consecutive to abdomino-pelvic radiotherapy
- 11.15 **Iuliana Toma-Dasu**, Stockholms Universitet and Karolinska Institutet, Sweden:
Risk of secondary cancer induced by radiotherapy
- 11.30 **Wolfram Stiller**, Universitätsklinikum Heidelberg, Germany:
CT technology developments: what are the benefits for radiation protection?
- 11.45 **John Damilakis**, University of Crete, Greece: *3D patient-specific and equipment-specific dosimetry in CT: from conceptus to the adolescent*
- 12.00 **C. Hoeschen**, Helmholtz Zentrum München and Otto-von-Guericke University, Germany:
Common Strategic Research Agenda for Radiation Protection in Medicine by the European Medical Associations representing Ionising Radiation Applications in Medicine
- 12.15 **Graciano Paulo**, Coimbra Health School, Portugal: *Diagnostic Reference Levels in plain radiography for paediatric imaging: a Portuguese study*

12.30 Lunch and Poster Session B

Building 3532, Rooms 1050 and 1051

Session 12: Concluding session

Chair: **Thomas Jung**, BfS, Germany

Building 23, Auditorium

14.00 **MELODI Award**

14.30 Contributions of Sessions 3 through 11 to MELODI SRA

15.20 Simon Bouffler, Public Health England, UK: MELODI Workshop 2016

15.25 Mike Atkinson, Helmholtz Zentrum München, Germany: Concluding Remarks

15.30 End of Workshop

Satellite events:

Monday, 9 November 2015

09:30-12:30 **SEMI-NUC** dissemination meeting (Building 23 Auditorium)

09:30-12:30 **MELODI** Management Board /General assembly meeting (BfS; Room 128/130)

19:30-21:00 **OPERRA** Management Board meeting (BfS; Room 128/130)

Wednesday, 11 November 2015

09:00-10:30 **MELODI** Scientific Committee (BfS; Room 128/130)

10:30-15:00 **OPERRA-T2.1 EURAMET** (BfS, Room 136)

16:00-17:30 European Joint Programming in radiation protection research - From **OPERRA** to **CONCERT**. Open session (Building 23 Auditorium)