

WORKSHOP

# Effects of Ionising Radiation Exposure in Offspring and Next Generations

31<sup>st</sup> May – 2<sup>nd</sup> June 2022  
Budapest, Hungary



In parallel with the 6<sup>th</sup>  
European IRPA Congress

Jointly organized by ICRP Task Group 121 under Committee 1 and  
European Radiation Protection Research Platforms MELODI and ALLIANCE



MELODI



EUROPEAN RADIOECOLOGICAL ALLIANCE

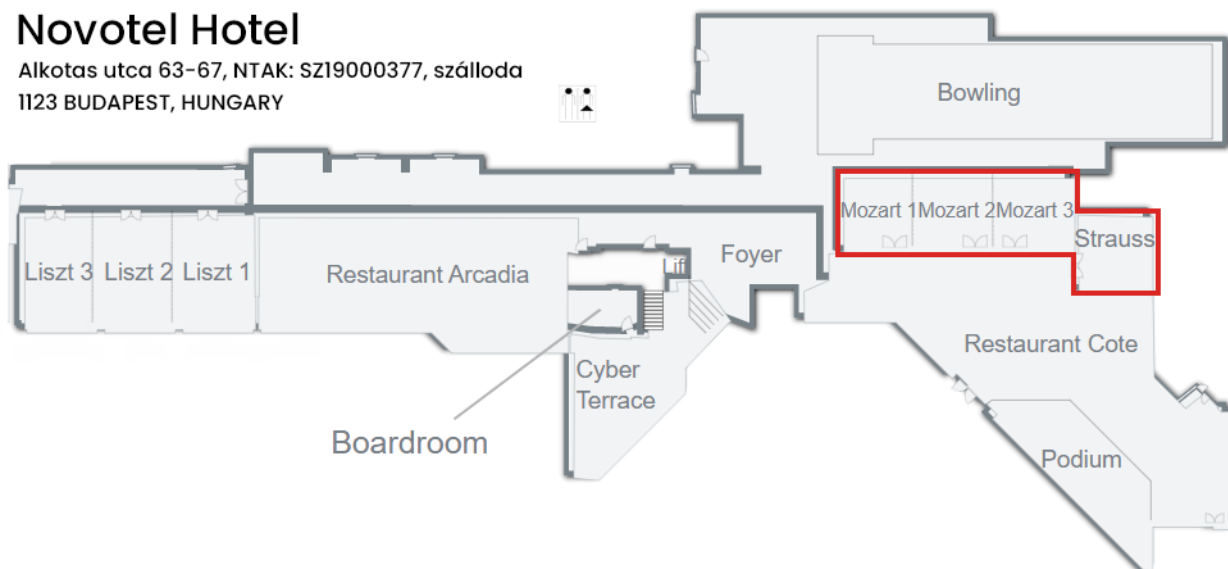
## Organising team on behalf of ICRP TG121, MELODI and ALLIANCE:

Sisko Salomaa      Dominique Laurier      Christelle Adam-Guillermin      Aidana Amrenova  
Richard Wakeford      Kimberly Applegate      Nele Horemans

## WORKSHOP LOCATION

### Novotel Hotel

Alkotas utca 63-67, NTAJ: SZ19000377, szálloda  
1123 BUDAPEST, HUNGARY



WORKSHOP | 31 MAY - 2 JUNE 2022 | BUDAPEST, HUNGARY

## Effects of Ionising Radiation Exposure in Offspring and Next Generations

MONDAY 30 MAY 2022

18:00 18:00 - 20:00

Welcome Reception with IRPA Congress

20:00

# Effects of Ionising Radiation Exposure in Offspring and Next Generations

TUESDAY 31 MAY 2022 | PLENARY SESSION

9:00	9:00 - 10:00 <b>Welcome and Introduction to ICRP TG121 Aims by Chairs of Breakout Sessions</b> Sisko Salomaa (Group A); Richard Wakeford and Kimberly Applegate (Group B); Christelle Adam-Guillermin (Group C) ; Dominique Laurier (Group D)  <b>Working Arrangements (Aidana Amrenova and Kelsey Cloutier)</b>
10:00	10:00 - 10:30 <b>Ritsu Sakata - Congenital Malformations and Perinatal Deaths Among The Children of Atomic Bomb Survivors: A Reappraisal (Pre-Recorded)</b>
10:30	10:30 - 11:00 COFFEE BREAK
11:00	11:00 - 11:30 <b>Nori Nakamura - Why Genetic Effects of Radiation Are Observed in Mice but Not in Humans? (Pre-Recorded)</b>
11:30	11:30 - 12:00 <b>Evgenia Ostroumova - Trio Studies of Parental Irradiation and Germline Mutations in Their Offspring</b>
12:00	12:00 - 12:30 <b>Zdenko Herceg - Epigenetic Mechanisms and Cancer Risk in Future Generations</b>
12:30	12:30 - 12:45 Discussion
12:45	12:45 - 14:15 LUNCH BREAK
14:15	14:15 - 15:15 <b>Presentations on Transversal Topics (4x15 min)</b> <ul style="list-style-type: none"><li>• Manoor Prakash Hande - Factors Influencing Radiation Effects: Pre- and Post-Conceptional Exposures</li><li>• Svetlana Sosnina - Consequences Which Mother's Irradiation Has: Risks of Children's Congenital Malformations (Pre-Recorded)</li><li>• Eric Grant - The Advantages and Limitations of RERF Data for the Analysis of Radiation Effects on Offspring and Next Generations</li><li>• Augusto Giussani - Dosimetric Aspects and Uncertainties Relevant for TG121</li></ul>
15:15	15:15 - 15:45 <b>Questions to Breakout Groups</b> Discussion
15:45	15:45 - 16:15 COFFEE BREAK
16:15	16:15 - 18:00 <b>Breakout Sessions A-D; Short Topical Presentations And Discussion</b>  (Full list of presentations on next page)
18:00	

## Effects of Ionising Radiation Exposure in Offspring and Next Generations

TUESDAY 31 MAY 2022 | 16:15 - 18:00 PRESENTATIONS

### Short Topical Presentations Group A:

- **Sisko Salomaa** - Fundamental Biology of Male and Female Gametogenesis; Highlighting Periods That Are Sensitive for Radiation Effects
- **Rhona Anderson** - Genetic and Cytogenetic Family Trio Study
- **Vadim Chumak** - Assessment of Gonadal Doses Within the US-Ukraine TRIO Study

### Short Topical Presentations Group B:

- **Kimberly Applegate** - Fundamental Biology of Embryonic and Fetal Development, Highlighting Periods That Are Sensitive for Radiation Effects (Development and Cancer Induction)
- **Stéphane Grison** - Fetal Development and Irradiation: A Quick Look Relevant for Multigenerational and Transgenerational Effects Studies
- **Ludmila Liutsko** - Relationship Between Thyroid Hormone Levels, Radiation Dose and IQ in Children Exposed in Utero by the Chernobyl Accident and Controls
- **Mohammed Abderrafi Benotmane** - Radiation Exposure During Brain Development & Long Lasting Persistent Effects
- **Balázs Madas** - Impact of Radiation Induced Cell Death on Mutation Induction
- **Klaus Trott** - The Effects of In Utero Radiation Exposure on Human Embryonal Development

### Short Topical Presentations Group C:

- **Sisko Salomaa** - Epigenetics and Inheritance of Acquired Characteristics: Implications for Evolution Theory
- **Sandrine Frelon** - Importance of Multigenerational Studies for Ecological Risk Assessment of Ionizing Radiation: Invertebrate Case Studies After Chronic Gamma Exposure (Pre-recorded)
- **Paulus Laanen** - The Effect on Dna Methylation Changes in Arabidopsis Thaliana Plants as a Result of Exposure to Gamma Radiation Over Multiple Generations (Pre-recorded)

### Short Topical Presentations Group D:

- **Aidana Amrenova** - How Heritable Effects Were Quantified in ICRP Publication 103
- **Thierry Schneider** - Addressing Heritable Effects in the Implementation of the System of Radiological Protection: Preliminary Reflections
- **Friedo Zölzer** - Ethical Aspects of Radiological Protection for Offspring and Next Generations

WEDNESDAY 1 JUNE 2022 | BREAKOUT SESSIONS A-D

9:00	9:00 - 10:30 Discussion on First Set of Questions
10:30	10:30 - 11:00 COFFEE BREAK
11:00	11:00 - 12:45 Discussion on Second Set of Questions
12:45	12:45 - 14:15 LUNCH BREAK
14:15	14:15 - 15:45 Discussion on Third Set of Questions
15:45	15:45 - 16:15 COFFEE BREAK
16:15	16:15 - 18:00 Additional Points; Conclusive Remarks
18:00	

THURSDAY 2 JUNE 2022

9:00	9:00 - 10:30 Breakout Sessions A-D; Preparing Summaries and Conclusions
10:30	10:30 - 11:15 COFFEE BREAK
11:15	11:15 - 12:45 <b>Joint IRPA session: Radiobiology I (All workshop participants encouraged to join)</b> <ul style="list-style-type: none"><li>• Vadim Chumak - Dose Reconstruction for Epidemiological Studies Among Chernobyl Cleanup Workers: Review of Accomplishments and Outlook</li><li>• Dominique Laurier - Effects of Radiation Exposure on Offspring and Next Generations: Current Issues and Potential Impact for Radiological Protection</li><li>• Sisko Salomaa - Effects of Radiation Exposure on Offspring and Next Generations: Genetic and Epigenetic Effects</li><li>• Richard Wakeford - Effects of Radiation Exposure on Offspring and Next Generations: Effects Consequent to Intrauterine Exposure to Ionising Radiation</li><li>• Christelle Adam-Guillermin - Effects of Radiation Exposure on Offspring and Next Generations: Heritable Effects in Non-human Species</li><li>• Stéphane Grison - Multigenerational Effects of Coexposure to Chronic Low-Dose in Utero Exposure to Internalized Cs-137 and Post-natal High-Fat Diet in Mice: Study Plan and Collaboration Opportunities</li></ul>
12:45	12:45 - 14:15 LUNCH BREAK
14:15	14:15 - 15:45 <ul style="list-style-type: none"><li>• Reports From Breakout Sessions</li><li>• General Discussion</li><li>• Way Forward; Plan For Special Issue With Summary Articles</li><li>• Farewell</li></ul>
15:45	15:45 - 16:15 COFFEE BREAK
16:15	16:15 - 18:00 ICRP TG121 Meeting (Restricted to TG Members)
18:00	