MELODI
Multidisciplinary European Low Dose Initiative

There are a number of open scientific questions which should be resolved in order to consolidate the European radiation protection framework in the area of low dose exposure to ionising radiation. Research on low dose risk requires multidisciplinary approaches and long-term commitment. Several scientific and regulatory bodies set up the MELODI platform in 2010 to address societal and public concerns related to the radiation exposure. The research platform is open to any organisation that shares the mission of developing and updating a joint research agenda in low dose risk. MELODI is willing to play a key role in coordinating present and future research in Europe, contributing to the training and education and engaging with international partners such as WHO, IAEA, USA and Japan.

How robust is the system of radiation protection and risk assessment?

The current system of radiation protection makes judgements in several important areas: the four blue boxes indicate judgements that fall directly within the system of protection against the low dose radiation effects as recommended by ICRP, whereas the boxes on the right identify issues that are, at present, included only to a minor degree.

Aim of MELODI

- Identifying research priorities in the low dose research
- Establishing and updating a Strategic Research Agenda (SRA) addressing low dose risk
- Sustaining education & training activities, maintaining infrastructures and disseminating results
- Promoting interdisciplinary collaboration
- Promoting regular interactions between the scientific community, international radiation protection bodies and stakeholders

MELODI founding members

Belgian Nuclear Research Centre (SCK-CEN), Belgium
Centre for Radiation Protection Research, Stockholm University (SU), Sweden
Federal Office for Radiation Protection (BfS), Germany
French Atomic Energy and Alternative Energies Commission (CEA), France
Health Protection Agency (HPA), United Kingdom
HelmholtzZentrum München (HMGU), Germany
IRSN, French Institute for Radiological Protection and Nuclear Safety, France
Italian National Institute of Health (ISS), Italy
Madrid Autonomous University (UAM), Spain
National Institute for Nuclear, Chemical and Biological Protection (SUJCHBO), Czech Republic
National Institute for Public Health and the Environment (RIVM), Netherlands
Network of Competence in Radiation Research (KVSF), Germany
Nuclear and Technological Institute (ITN), Portugal
STUK - Radiation and Nuclear Safety Authority, Finland
Universitat Rovira i Virgili – Public University of Tarragona (TEXNIO), Spain

Shape of dose response
- LNT
- Linear non-threshold
- Dose rate

Tissue sensitivities
- Tissue weighting factors

Radiation quality
- Radiation weighting factors

Individual sensitivities
- Genetics
- Age
- Gender
- Lifestyle
- Other exposures

Non-cancer effects
- Circulatory diseases
- Cognitive functions
- Lens opacities

Internal emitters
- Biokinetic models
- Dosimetric models

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