



Introduction to European DoReMi programme on low dose risk

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Aim of DoReMi

- to promote sustainable integration of low dose risk research in Europe
- to act as operational tool to establish the MELODI platform
- to address the key policy questions identified by the HLEG Report on Low Dose Risk Research by RTD, Training and dissemination activities



DoReMi Facts and Figures

- EC funding 13 M€, total 21M€
- 2010-2015 (6 years)
- Started with 12 partners
- 3 competitive calls and 3 internal calls, proposals evaluated by External Advisory Board
- Expansion of project portfolio and inclusion of new partners
- Final number of partners: 36



DoReMi

Low Dose Research towards Multidisciplinary integration

Network of Excellence 2010-2015 (short term)

www.doremi-noe.net



MELODI

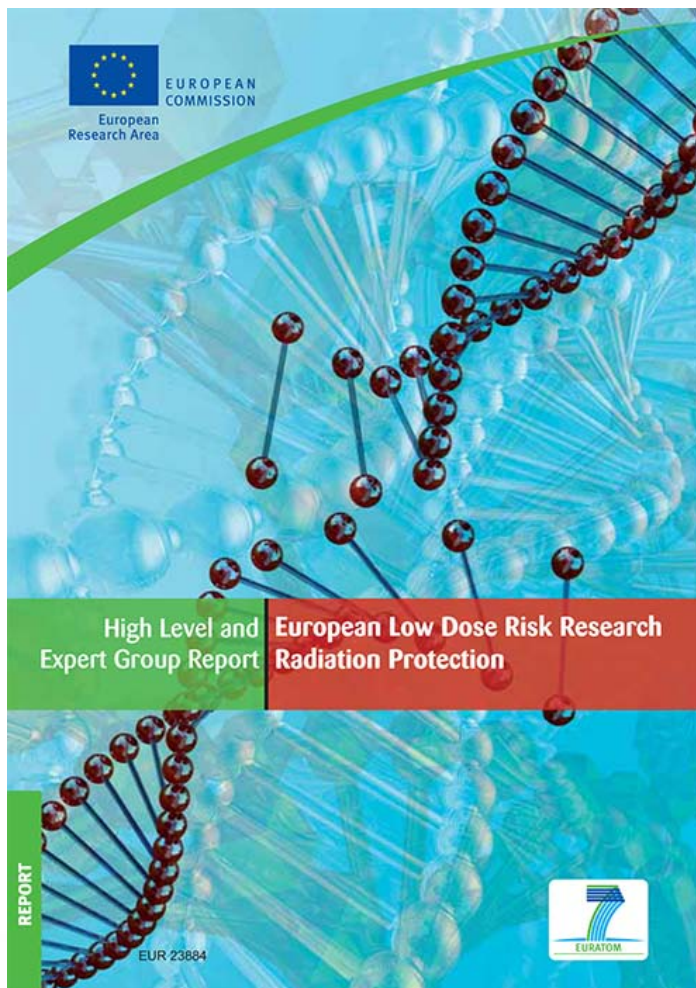
Multidisciplinary European Low Dose Initiative

*Open RTD platform guiding priorities
in low dose research in Europe (long term)*

www.melodi-online.eu



HLEG Report 2009

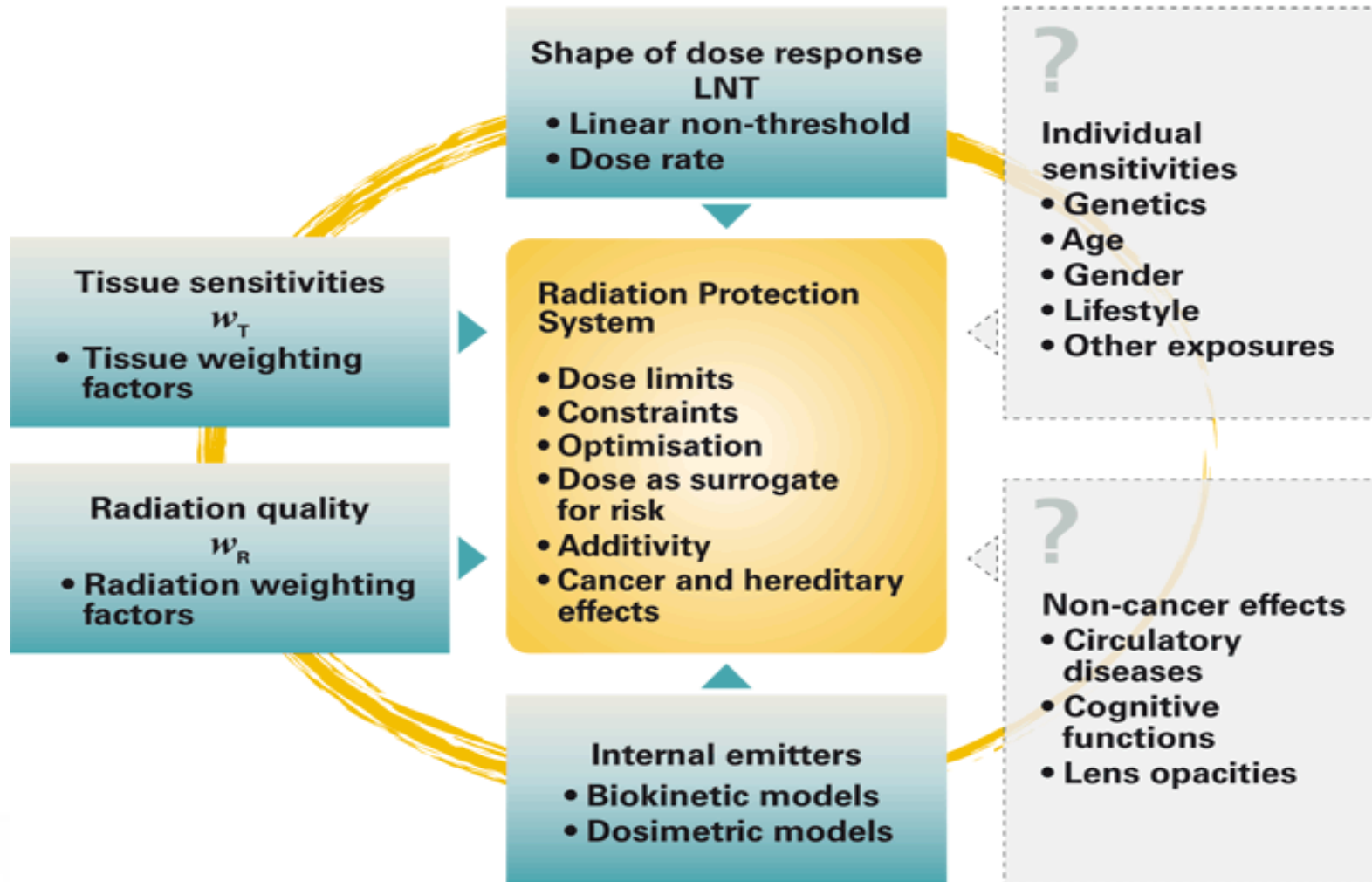


See Cordis for EC Report
EUR 23884

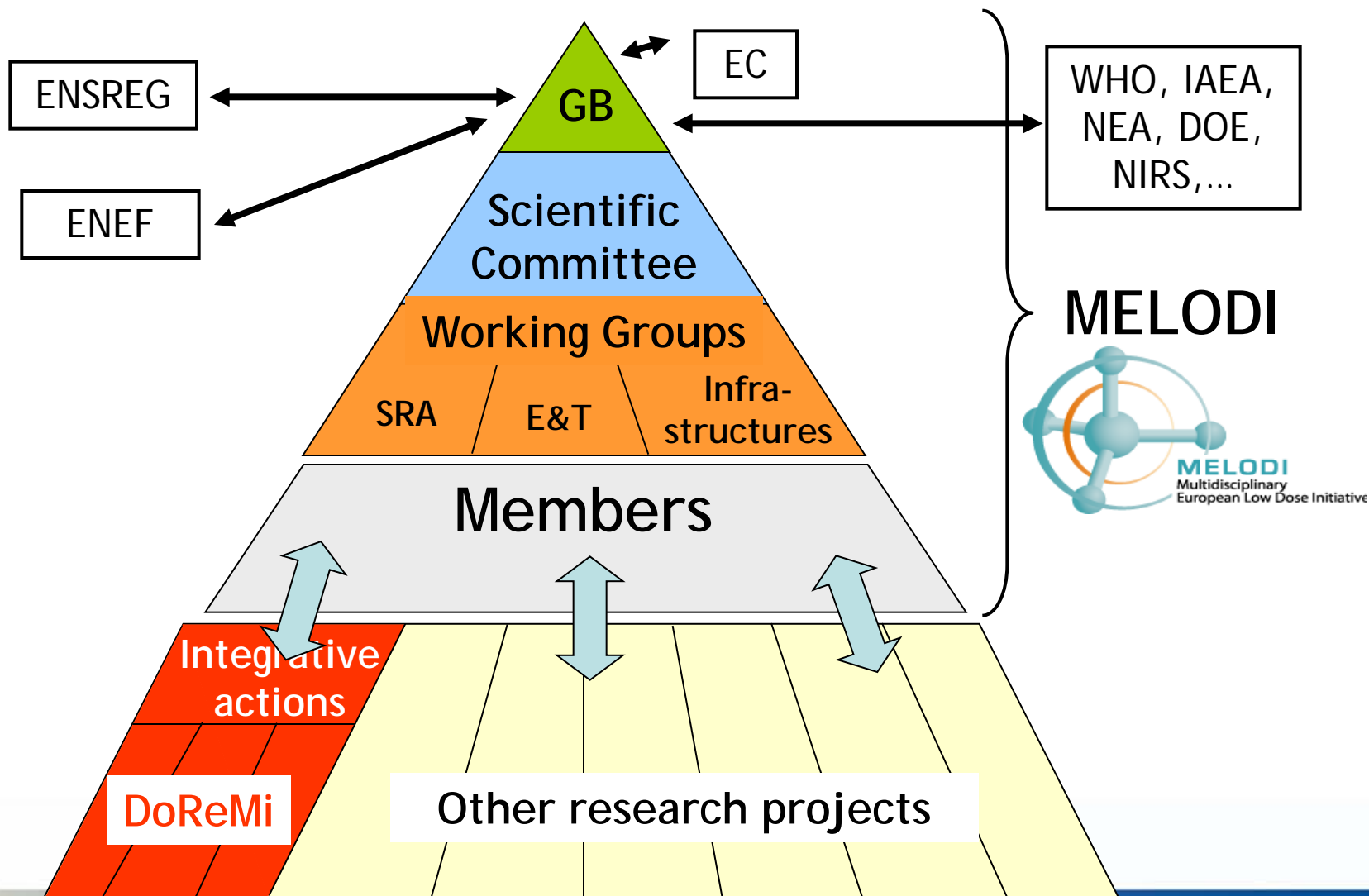
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How robust is the system of radiation protection and risk assessment?

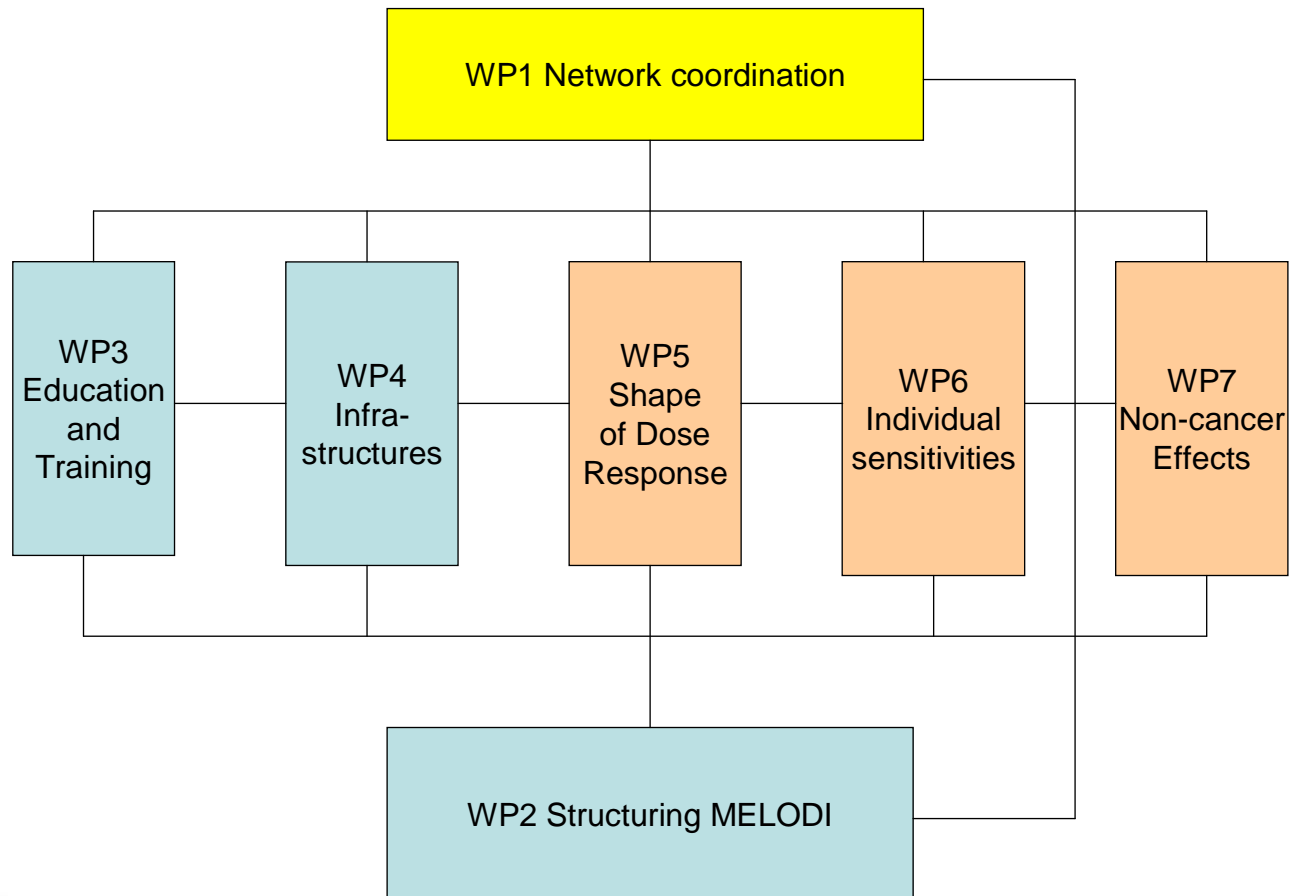


MELODI and DoReMi: Complementarity





DoReMi programme structure





DoReMi Infrastructure Programme

Task	Work	Starting
4.1	Survey of existing facilities for low dose risk research	2010
4.2	Characterization of infrastructure needs and roadmap of implementation	2010
4.3	Implementation of DoReMi support activities for shared infrastructures	2010
4.4	Development and implementation of access to Infrastructure	2010
4.5	Open Access to the UMB low dose irradiation facility (FIGARO)	2011
4.6	Dose/Dose-rate Radiation Effects in Brain Cancer Risk (DDRE-BrainCancer)	2011
4.7	Low dose/dose rate gamma irradiation facility for in vitro biological systems (LIBIS)	2012
4.8	Integration of STORE into DoReMi as a trustable and viable database and/or pointer to biobanks and ascertain sustainability	2012
4.9	Provision of ion microbeam irradiation facility SNAKE (MicroRAD)	2013
4.10	Laboratory infrastructure for retrospective radon and thoron dosimetry (RETRODOS)	2014



DoReMi Shape of dose response programme

Task	Work	Starting
5.1	Phase – shifts in responses and processes at high/low doses and dose rates	2010
5.1.1	Low dose Gene Expression signature (LoGiC)	2011
5.2	Assessing the relative contribution of targeted (DNA), non-targeted and systemic processes to radiation carcinogenesis	2010
5.2.1	Modulation of Inflammation by low and moderate dose Ionising Radiation (ModInIR)	2011
5.3	The dynamics of pre-neoplastic change and clonal development	2010
5.4	Mathematical models to link experimental findings and epidemiological data	2010
5.5	Assessing the risk from internal exposures	2010
5.5.1	Internal Emitters in Uranium Miners (INTEMITUM)	2013
5.5.2	Assembly of internal radiation dose for UKAEA and AWE epidemiology cohorts (AIRDoseUK)	2013
5.6	Track structures and initial events: an integrated approach to assess the issue of radiation quality dependence (INITIUM)	2012
5.7	Induction and facilitation of chromothripsis by low dose ionizing radiation (In-FaCT-IR)	2013
5.8	Concerted Action for an Integrated (biology-dosimetry-epidemiology) Research project on Occupational Uranium Exposure (CURE)	2013
5.9	Low dose radiation-induced non-targeter effects in vivo: the role of microvesicles in signal transduction (Rad-Mvivo)	2014
5.10	Effects of Chronic LOW-dose Gamma Irradiation on GAstrointestinal Tumorigenesis (CLOGICAT)	2014



DoReMi Individual sensitivity programme

Task	Work	Starting
6.1	Molecular epidemiological studies to address the role of individual genetic variation in determining susceptibility to low doses	2010
6.2	Identification of genetic modifiers of individual cancer susceptibility and their mechanisms of action	2010
6.3	Modelling of the effects on risk prediction models due to changes in biological processes influenced by genetic variability	2010
6.4	The effect of genetic modifiers on carcinogenesis following low dose <u>rate</u> exposure	2010
6.5	Contribution of genetic and epigenetic mechanisms that indirectly influence susceptibility to radiation-induced cancer	2010
6.6	Implementation of the DoReMi strategy for a large scale molecular epidemiological study to quantify genetic contribution to individual susceptibility	2010
6.7	Planning expansion of research portfolio	2010
6.8	Predicting individual radiation sensitivity with Raman microspectroscopy (PRISM)	2011
6.9	Integrating radiation biomarker into epidemiology of post-Chernobyl thyroid cancer from Belarus (INT-Thyr)	2012
6.10	Characterization of DNA lesions in the nuclear ultrastructure of differentiated and tissue-specific stem cells after protracted low-dose radiation (Zif-TEM)	2013
6.11	Mechanism of low dose response to ionizing radiation and its significance in radiation protection (RADSENS)	2013



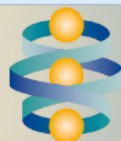
DoReMi Non-cancer effects programme

Task	Work	Starting
7.1	Structuring the research effort on non-cancer effects according to the HLEG roadmap: organisation of consultation/exploratory meetings and funding integrative RTD projects	2010
7.2	Preparation of a pilot study to conduct molecular epidemiology studies in vascular radiation damage	2010
7.3	Feasibility study towards a systems biology approach of radiation response of the endothelium	2010
7.4	Pilot epidemiological study of lens opacities among a cohort of interventional radiologists and cardiologists	2010
7.4.1	Lens opacities: Methodology implementation (ELDO)	2012
7.5	Pilot study of external irradiation versus internal contamination effects on neurogenesis	2010
7.6	Study on contribution of low dose X-radiation in induction of anti-inflammation	2010
7.7	Low dose Gene Expression signature and its impact on Cardiovascular disease (LoGiC)	2011
7.8	Study on contribution of low dose X-radiation in induction of cataractogenesis and influencing genetic and cell communication factors (LDR-OPTI-GEN)	2013
7.9	Low and moderate dose radiation effects on brain microvascular pericytes: epigenetic mechanisms and functional consequences (PERIRAD)	2013
7.10	Influence of a chronic LD and LDR exposure onto the development of Parkinson symptoms in genetically predisposed Pitx3-EYL/EYL Ogg1^{-/-} mouse mutant (OSTINATO)	2013
7.11	Epidemiological pilot study on radiation-induced cataract in interventional cardiology (EVAMET)	2014
7.12	Effect of low doses of low-LET radiation on impaired vascular endothelium (ELDORENDO)	2014
7.13	Low-dose ionizing radiation-induced cataracts in the mouse: invivo and invitro studies (RadCat)	2014



Summary of DoReMi

- **Joint Programme for Integration**
 - MELODI Association established and operational
 - Inclusion of 24 new partners in DoReMi
- **Joint Programme for Research**
 - TRA and TRA Statements
 - 3 competitive and 3 internal calls
 - Expansion of programme portfolio from 22 to 49 tasks, a total of 27 new tasks/sub-tasks
 - Supporting the development of MELODI SRA
- **Joint Programme for Spreading of Excellence**
 - Supporting 6-9 training courses each year
 - 2-year MSc programme – Munich?
 - Dissemination: workshops, web site, publications



Quick Links

DoReMi's 3rd competitive call is closed

Login

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MEETINGS & EVENTS



NEW: DoReMi Courses Information 2014-2015

>>> DoReMi PERFORMANCE BAROMETER >>>



In order to illustrate the scientific progress made during the first years of the DoReMi project a list of peer reviewed DoReMi publications has been established for each of the different tasks in work packages.

The results are presented in form of a DoReMi « **Barometer** » of the DoReMi publications that will be regularly updated.

Recent update has been performed in April 2015.

[» More information here >>>](#)

>>> LATEST NEWS >>>

- **The deadline for application to the InterRad course organized by Bfs in Oberschleisheim, Germany on July 6th-17th is extended to May 31st, 2015.**
[» More information here >>>](#)
- **Post-doctoral position – Assessment of the health impact of residential radon in France available at IRSN, France**
[» More information here >>>](#)
- **The final report of DoReMi Task 5.8 CURE final report: Report for an integrated (biology-dosimetry-epidemiology) research project on occupational Uranium exposure has been published.**
[» More information here >>>](#)
- **DoReMi peer reviewed publications NEW!**
To help identifying the question(s) addressed by each DoReMi peer reviewed publication listed below and their relevance to DoReMi workplan, DoReMi peer-reviewed publications are now tagged by keywords related to the main research areas identified in DoReMi. These keywords are "cancer", "non-cancer", "individual sensitivity", "radiation quality", "tissue sensitivity", "internal emitters (contamination)", "epidemiology", "modelling" and "non-targeted effects (bystander)".
[» More information here >>>](#)
- **Group leaders positions NEW!**
Several positions are currently available at the Institut Curie-Orsay, France.
[» More information here >>>](#)

DoReMi News

● DoReMi Newsletter 1/2015 Published



➔ Previous DoReMi News



DoReMi Meetings

● 15th International Congress of Radiation Research 2015

25-29 May 2015
Kyoto
JAPAN

➔ Past Events



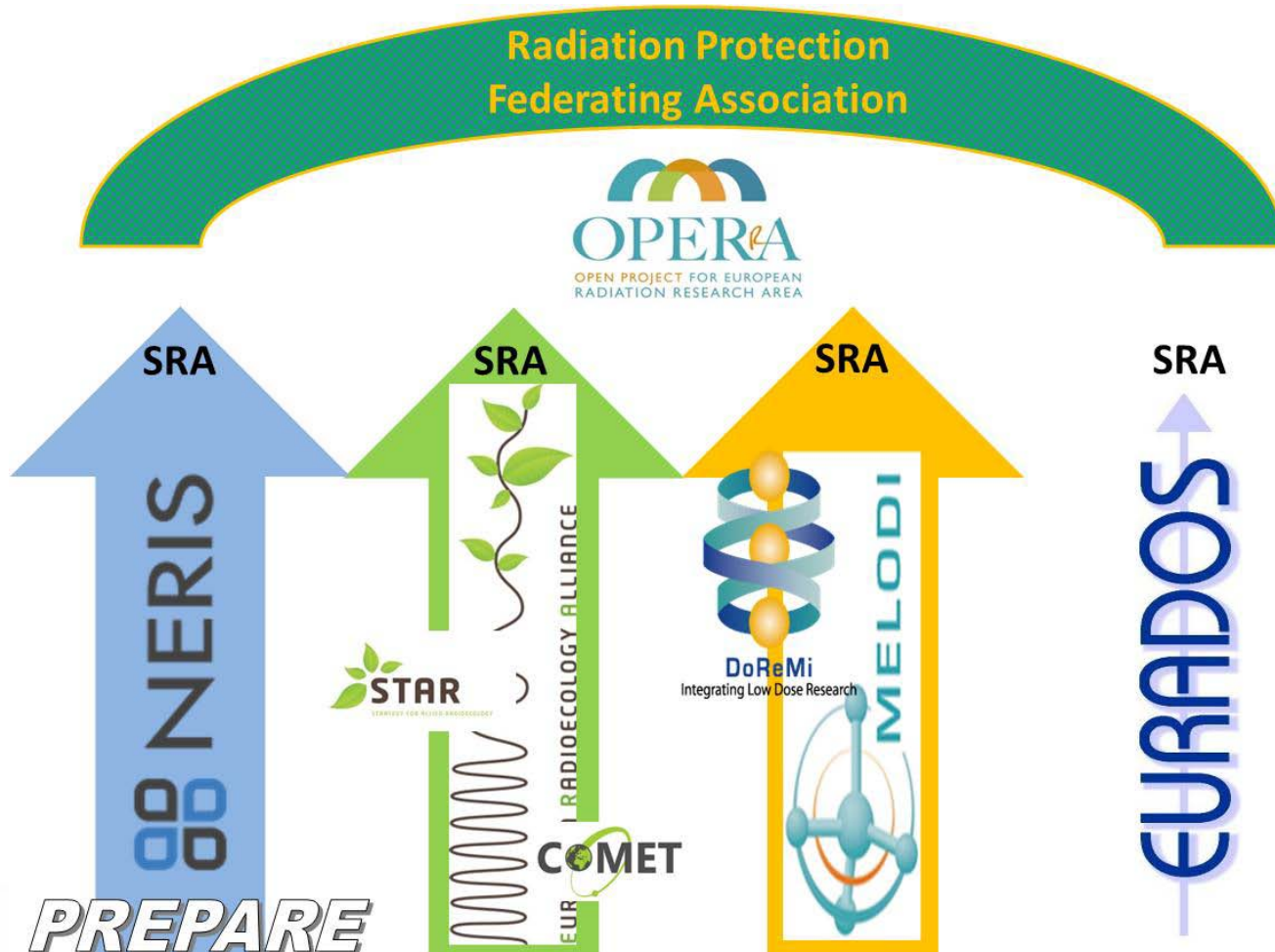
Evolution of European RP Research Area

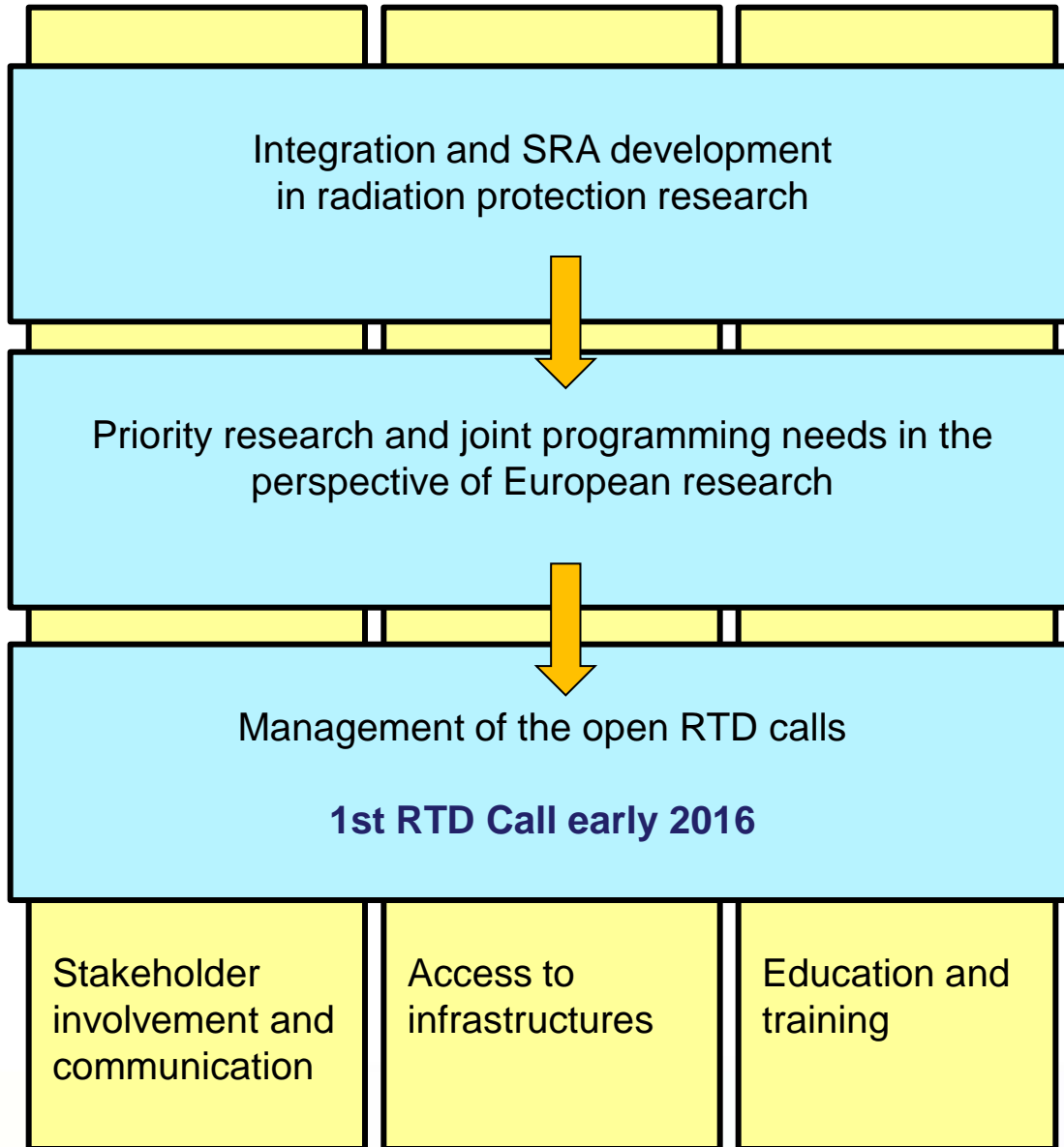


- ✓ High Level and Expert Group Report (2009)
- ✓ Letter of Intent for MELODI: BfS, IRSN, CEA, STUK, ISS (2009)
- ✓ Association with 15 founding members (2010)
- ✓ Strategic Research Agenda, SRA (2011)
- ✓ Enlargement of MELODI (2011, 2012, 2013, 2014): now 31 members
- ✓ Other parallel RP research platforms established: NERIS (2011), ALLIANCE (2012)
- ✓ EC proposes MELODI to take lead (2012)
- ✓ OPERRA: Open Project for European Radiation Research Area (2013-2017)
- ✓ EURADOS published SRA (2014)
- ✓ Horizon2020: Call for European Joint Program (2014)
- ✓ CONCERT EJP starting in June 2015



European radiation protection research platforms





- 2015 – 2020
- Integration of national programs (Co-fund action)
- EU funding 20 M€
- MELODI
- NERIS
- ALLIANCE
- EURADOS
- National Program Managers
- Linked Third Parties (LTP): universities