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DoReMi Special Issue - Integrating European low dose research. Editorial

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The DoReMi Network of Excellence (2010-2015) was designed to promote the sustainable integration of low dose risk research in Europe, in order to facilitate efforts to resolve the key policy questions identified by the 'High Level Expert Group (HLEG) on Low Dose Risk Research' (www.hleg.de). These questions are the shape/s of cancer dose-risk relationship/s, variation in risk between individuals, differences in tissue sensitivities for cancer, effects of radiation quality, risks from internal exposures and the risks of non-cancer effects. The DoReMi project brought together 36 partner organizations from 16 countries in Europe and beyond.

The research activities of DoReMi have focused on the research areas identified by the HLEG as being the most promising in terms of resolving the stated key policy questions. Three internal research calls and three competitive calls for the inclusion of new partners were arranged during the project. More than 100 papers were published already during the lifetime of DoReMi, and these were subsequently summarised in the review by Averbeck et al. (2018). This Special Issue provides a set of additional publications, highlighting results obtained towards the end of the project (Friedland et al.; Geipl et al.; Juerss et al.; Lumniczky et al.; Macaeva et al.; Meade et al.; Slijepcevic et al.), as well as achievements related to infrastructures (Hansen et al.; Lind et al.) and education and training activities (Smyth et al.).

In addition to conducting research on low dose effects and health risks, DoReMi contributed to the integration of European research area by supporting the development of the MELODI research platform, an association that now has more than 40 institutional members. MELODI has a joint Strategic Research Agenda that is openly debated and updated by the scientific community. The initial steps for a shorter term research agenda were taken by DoReMi. Other important elements for excellence in research are suitable infrastructures and education and training of young scientists. DoReMi supported the development, updating and access to key infrastructures for low dose risk research, such as low dose rate irradiation facilities, microbeams and STORE database providing links and access to radiobiological data and samples. A number of training courses consisting of lectures and experimental work were organized by DoReMi: during the six years, more than 500 young scientists were trained by DoReMi partners.

Overall, the DoReMi activities paved way for the structuring and functions of European radiation protection research platforms that currently exist not only for low dose risk (MELODI), but also for radioecology (ALLIANCE), dosimetry (EURADOS), nuclear emergency preparedness and response (NERIS) and medical radiation protection (EURAMED) (Hinton et al. 2013, Rühm et al. 2016, EANM et al. 2017, Salomaa et al. 2017, Kreuzer et al 2018).

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