PIANOFORTE travel grant report

Attending the European Radiation Protection Week (ERPW 2026) in Berlin, 5-9 October, was an inspiring experience, both scientifically and personally. The conference brought together researchers, clinicians, and regulators, offering a multidisciplinary perspective on current challenges and advances in radiation protection.

I was delighted to represent the PIANOFORTE partnership's DOSELIA project and present our poster, *"DOSELIA PROJECT TASK 6.1: Genetic Susceptibility to Radiation-Induced Cancer and Treatment Response: The Role of Trisomy 21, ATM, BRCA1/2 and Radiation Quality."* The discussions generated by our poster provided valuable feedback on our ongoing review, which investigates how radiation characteristics, immune profiles, and genetic backgrounds contribute to radiation-induced carcinogenesis. These exchanges also highlighted opportunities for future research and collaboration.

Beyond the poster session, the conference covered several key themes relevant to our research. Sessions on mechanistic radiobiology explored tissue sensitivity across developmental stages, the protective role of background radiation in stem cells, and interspecies differences in clonal expansion modeling. Clinical discussions focused on translating bench research into practice, notably through staff training and the European harmonization of audits. In environmental radiobiology, research addressed the long-term ecological impacts of nuclear accidents alongside computational modeling for wildlife. Finally, roundtables with bodies such as ICRP and HERCA emphasized balancing biological complexity with practical radiation protection, reinforcing the LNT model, ALARA principles, and the need to evaluate combined multi-risk exposures. These perspectives are particularly relevant to the DOSELIA project, which aims to better understand individual genetic susceptibility and its implications for radiation protection and treatment response.

Overall, ERPW 2026 provided an excellent opportunity to exchange knowledge with experts across the field, receive feedback on our work, and identify new directions for research and collaboration.

I would like to express my sincere gratitude to PIANOFORTE for its financial support, which made my attendance and active participation in this stimulating and enriching conference possible.

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