PIANOFORTE travel grant activity report

Ilona Barbara Csordás, Hungary
Oral presentation at ERRS2024, Aveiro, Portugal

I had the opportunity of attending the 48th Annual Meeting of the European Radiation Research Society (ERRS), held in Aveiro, Portugal, from September 10-13, 2024. My participation in the conference was supported by the PIANOFORTE Travel Grant for early career researchers, which I was awarded.

Conference Overview

The meeting covered a broad range of significant topics within the fields of radiobiology, radiation protection, radiation physics, and the environmental impacts of radiation. The program featured over 100 oral presentations and 34 poster presentations, offering a comprehensive overview of current research in radiation science. In addition to these presentations, several short courses were offered, led by experts in their respective fields. These sessions allowed participants to explore specific topics in greater detail than traditional oral presentations permit. The short courses were conducted on the following topics: environmental effects of radiation, biodosimetry, radiotherapy, impact of ionizing radiation on the immune system, radiation-induced multi- and transgenerational effects

Detailed Conference Topics:

The sessions were organized around a variety of key themes, including:

- Space radiation
- Radiation physics, dosimetry, computational dosimetry, and modeling
- Particle radiation
- Human and environmental health effects, with a focus on high and low dose/dose rate effects
- Clinical, translational, and radiotherapy research, including the use of radiopharmaceuticals in theragnostics
- Molecular and cellular effects of artificial and natural radiation, including non-targeted effects
- Monitoring and assessment of natural radioactivity, including radon and NORM exposure and risk evaluation
- Radioecology and environmental dosimetry

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- The impact of multiple stressors, including ionizing and non-ionizing radiation, chemical stressors, and radiosensitizers
- Radiation protection, emergency preparedness, radioactive waste management, and radiation countermeasures
- Societal aspects of radiation protection
- Biomarkers for dosimetry and clinical outcome prediction, with a focus on potential applications of artificial intelligence (AI)

Personal Contribution

On the first day of the conference, I had the opportunity to present my latest research in a 10-minute oral presentation followed by a 5-minute discussion session. The title of my presentation was: "*Identifying Extracellular Vesicle-miRNAs with a Possible Role in Ionizing Radiation-Induced Leukemogenesis, and Their EV Packaging Mechanisms in the Bone Marrow*." In my presentation, I discussed the role of extracellular vesicles and their potential involvement in the development of radiation-induced leukemia by altering intercellular communication in the bone marrow.

Networking and Professional Development

Recognizing the importance of building a professional network as a young researcher, I attended the ERRS NgenR^2 Network session, an event organized by a group of enthusiastic young researchers. This session aimed to facilitate networking among early-career scientists and to support the next generation of radiation researchers. It was a valuable experience to connect with peers, exchange ideas, and learn about each other's work.

As an ERRS member, I have participated in the ERRS general assembly as well, where the most important points of the agenda were listed, including last year's main activities and the announcement of the new president and vice president.

Moreover, I attended a short course focused on radiobiology, specifically exploring the impact of radiation on the immune system. This course provided an in-depth understanding of the immunological effects of ionizing radiation, which is highly relevant to my ongoing research.

Conclusion

The 48th ERRS Annual Meeting was an enriching experience that provided me with the opportunity to present my research, expand my professional network, and deepen my understanding of key topics in radiation research. I am grateful for the funding that made my participation possible and look forward to applying the knowledge and connections gained at this event to my future research work.

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Sincerely,

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