

# PMBT Workshop 2026 in Pisa – Travel Report

Thanks to the Pianoforte travel grant, I had the opportunity to attend the PMBT Workshop 2026 in Pisa, from 28th to 30th April, where I presented my research on proton minibeam radiotherapy, a novel proton therapy approach that seeks to reduce damage to healthy tissues surrounding tumors. This work is carried out as my graduation project for my master's degree in Biomedical Engineering, with a medical physics specialization.

This was my first scientific oral presentation and, therefore, the first time I was able to share my work with the scientific community and receive feedback and comments from experts in the field. At this point in my life, my career in this field is just starting, so it was very important for me to discuss these topics with experienced researchers. Besides, given the novelty of this approach to cancer treatment, moments of discussion are essential for advancing research.

In addition to my presentation, I spent three days learning about the recent work being done in the field of particle minibeam radiotherapy, including minibeam production and characterization, dosimetric parameters and technologies, radiobiology, and the comparison and combination with FLASH therapy. As someone who is just starting out in this field, it was very valuable to gain this broad perspective on the current state of minibeam research.

One of the problems I have been facing during my project is not knowing which parameters are relevant for minibeam characterization or what the reference values for those measurements should be. This workshop gave me new insights into what is currently being done by other researchers and the potential trade-offs involved. I also gained knowledge about aspects that I had not yet considered for my project, such as radiobiological considerations, which gave me a new perspective on what my goals should be. I learned for example about how different types of organs react to radiation, which I haven't studied since my project is more focused on dosimetry and minibeam characterization.

During coffee breaks and dinners, I was also able to get to know the people at the conference on a more personal level, which I really appreciated. I learned about their backgrounds and was able to do some networking, which I believe contributed to my development as a future researcher.

I am therefore very grateful for this opportunity and look forward to attending more conferences like this in the future.