
BioMod^R Breast course in UniPv

I attended the BioMod^R Breast course at the University of Pavia, which focused on in vitro, in vivo, and in silico models for radiation studies. This course aligns with my involvement in the IMAGEOMICS project, which aims to optimize the benefit/risk ratio in breast cancer diagnosis and radiotherapy. The project's goal is to identify molecular, cellular, and imaging signatures of breast cancer heterogeneity to enhance personalized therapeutic strategies for synergistic treatment combinations. My role involves analyzing the state-of-the-art breast cancer radiation therapies and their combination with immunotherapy, as well as investigating potential biomarkers using open-access data and cross-validating results with other work packages.

Given my background in Genetics, which hadn't fully prepared me for radiation-related research, this course provided essential foundations for a deeper understanding of the field. The curriculum covered crucial aspects including the biological basis of radiation, epidemiological radiation metrics, and overviews about various breast cancer models for studying radiation effects. Additionally, the course facilitated valuable networking opportunities with other project members and enhanced my understanding of their research directions, thereby strengthening our collaborative potential.

A highlight of the course was the unique opportunity to visit one of the few Nuclear Reactors dedicated to medical radiation research. This facility produces low-energy neutrons for Neutron Capture Therapy (NCT) experiments. We also attended an engaging presentation on bioprinting, which included a practical demonstration of bioprinter functionality.

Beyond the academic components, we had the opportunity to explore Pavia's cultural heritage, including visits to the cathedral and the historic university complex, while also experiencing local gastronomy.

This enriching experience has been invaluable for participation at the IMAGEOMICS project, and I look forward to participating in future training courses.