

APPROFONDIMENTI SULLE PREPARAZIONI
RADIOFARMACEUTICHE

EVENTO ORGANIZZATO DAL GRUPPO DI STUDIO DI CHIMICA DEI RADIOFARMACI DEL GICR

“Alpha Emitters and Where to Find Them”**Dott.ssa. Marianna Tosato****26/02/2025 14:30 – 16:30**<https://us06web.zoom.us/meeting/register/Lrm5goBCTuUG1R7tkBXuzg><http://www.gicr-associazione.it>

Abstract: Targeted Alpha Therapy has emerged as a promising approach in cancer treatment, sparking significant interest in recent decades. However, its widespread adoption has been limited by the scarcity of α -emitting radionuclides and the complexities associated with their use. The availability of these radionuclides is often constrained by intricate production processes, purification methods, and regulatory and logistical hurdles. Additionally, the high costs and technical challenges associated with handling and applying α -emitting radionuclides create further obstacles to their widespread clinical implementation.

This seminar will provide a comprehensive overview of the leading α -particle emitting radionuclides used in clinical applications, focusing on their production processes and supply chains, and will introduce the 'Alpha Atlas' - a global map of production sites designed to help researchers, clinicians, and industry professionals in initiating or scaling up the use of α -emitters. We will also explore the challenges and complexities associated with their use, with a special emphasis on theranostic applications.

- Dr. Marianna Tosato is a postdoctoral researcher at the Radiopharmaceutical Chemistry Laboratory (Nuclear Medicine Department) of AUSL-IRCCS Hospital (Reggio Emilia, Italy). Trained as a bioinorganic and analytical chemist, Dr. Tosato graduated in Chemistry at the University of Padova (110/110 *cum laude*, 2018). In 2022, Dr. Tosato received her PhD in Molecular Sciences from the University of Padova (*cum laude*) and subsequently held a postdoctoral position at the same institution and was visiting postdoctoral researcher at the Department of Chemistry of Simon Fraser University (SFU) and the Canadian Particle Accelerator Center TRIUMF (Canada). Dr. Tosato has also worked in several national and international laboratories as visiting researcher, including the Hevesy Laboratories of the Technical University of Denmark (Denmark), the Center for Radiopharmaceutical Sciences at the Paul Scherrer Institute (PSI, Switzerland), the Centre for Structural Science - Research Centre for Natural Sciences (Hungary) and the Department of Chemical and Geological Sciences of University of Modena and Reggio Emilia (Italy). Her primary research focuses on the application of (unconventional) metallic radioisotopes for molecular imaging and targeted therapy of cancer.