Dr. Teresa Barra is a Post-Doctoral researcher specializing in biofabrication, 3D *in vitro* modeling, and advanced drug delivery strategies across the Blood-Brain Barrier (BBB). After graduating *cum laude* with a Master's Degree in Biology in 2018 from the University of Naples Federico II and passing the Professional Examination for Biologists in 2019, she earned her Ph.D. in Biology in 2022. Her doctoral thesis, supervised by Prof. Salvatore Valiante, focused on innovative strategies to enhance the targeted delivery of neuroprotective peptides into the Central Nervous System.

Her research trajectory includes key international and national experiences. She served as a Research Fellow at the Tissue Engineering Laboratory of HEPIA in Switzerland (focusing on the differentiation of minibrains derived from human iPSCs) and attended training in 3D bioprinting at the University of Pavia. She subsequently held Postdoctoral Fellowships at the Department of Pharmacy (University of Naples Federico II), developing peptide nanoplatforms to study glioblastoma in a 3D millifluidic BBB model, and at the Institute for Polymers, Composites and Biomaterials of the National Research Council (IPCB-CNR) in Naples, working on the PRIN PNRR *DI3DEM* project dedicated to 3D engineered tissue models.

Since 2024, Dr. Barra serves as the Scientific Coordinator of both the *Biofabrication and Tissue Engineering Core* and the *Advanced Microscopy Core* at the Department of Biology, University of Naples Federico II. Her technical expertise encompasses 3D bioprinting design and slicing, millifluidic bioreactor systems, advanced 2D/3D cell cultures, confocal microscopy, and molecular biology techniques. Over the years, she has built extensive expertise in dynamic 3D *in vitro* technologies through an active role with IVTech systems.

She has served as an organizer, speaker, and tutor across multiple IVTech workshops and webinars—including events at CNR Pisa, University of Campania "Luigi Vanvitelli", and Federico II—training researchers on advanced millifluidic platforms, Blood-Brain Barrier crosstalk, and 5D *in vitro* models. In addition to her research, she is deeply committed to teaching and academic mentorship. Since 2019, she has supervised more than 20 Bachelor's and Master's degree students, delivered lectures and practical laboratory sessions in Cytology, Histology, and Advanced Cell Biology, and served as a Subject Matter Expert (*Cultore della Materia*) at University Parthenope of Naples.

Dr. Barra has authored 11 scientific publications in high-impact international journals (including *International Journal of Pharmaceutics*, *Molecular Pharmaceutics*, and *Biomedicines*) and regularly presents at national and international conferences. In 2026, she was awarded the First Prize in the "One Health" category during the Young Experts Session at Interdepartmental Center for Environmental Research (C.I.R.AM) for her research on low-impact, sustainable nanomaterials.