

Curriculum Vitae

I hold a Bachelor's degree in Biological Sciences (2022), Master's degree with honors in Biology, specializing in Molecular Biology (2024), both awarded by the University of Perugia.

Since November 2024, I have been enrolled as a PhD student in *Medicine and Experimental Therapies* at the Department of Medicine and Surgery, University of Perugia.

Laboratory expertise

During my Master's research, I focused on phylogenetic analysis, starting with DNA extraction, sequence analysis, and the construction of phylogenetic trees. I gained extensive hands-on experience in extracting high-quality genomic DNA from various biological samples, followed by sequencing and sequence alignment. I also developed expertise in analyzing and interpreting phylogenetic relationships, constructing phylogenetic trees, and characterizing haplogroups and haplotypes. These techniques were essential for deepening my understanding of evolutionary processes and species relationships.

Building on this foundation, I further advanced my molecular biology expertise during my PhD research, preceded by an internship, where I focused on a broad range of advanced molecular techniques. I applied cutting-edge methods such as CRISPR/Cas9-based gene editing, gene knockout, and transfection assays, with a particular emphasis on *Toxoplasma gondii*, a protozoan parasite of major medical interest. Throughout my PhD research, I honed my skills in techniques such as PCR, qPCR, Western blotting, and plasmid construction, while also utilizing bioinformatics tools for data analysis and interpretation.