CV

Bachelor Degree in Biotechnology in University of Perugia (2019) with 94/110, Master Degree in Medical, Veterinary and Forensic Biotechnological Science in University of Perugia (2021) with 104/110. Currently PhD student in the Lab of Roberta Spaccapelo, from January 2022, in the PhD program in Systems Biology in Immune and Infectious Diseases.

Laboratory Expertise

First approach to laboratory in Bachelor degree training and thesis, involved in a study to investigate the role of GILZ (Glucocorticoid-induced leucine zipper) in pulmonary fibrosis learning basic molecular biology techniques like PCR, qPCR, nucleic acid extraction and quantification techniques and western blot. Moreover some basic knowledge have been acquired also in flow cytometry during this training.

Master degree training and thesis on a different field of study, involved in a project about the role of

oxidative stress in transgenic *Anopheles gambiae* mosquitoes midgut to potentially interfere with the Malaria parasite, *Plasmodium*. Lots of new laboratory and insectary expertise have been acquired thanks to this project.

First of all molecular cloning techniques, including also the theoretical design of the cloning strategy, as plasmid assembly, bacterial transformation, colony PCR, inverse PCR has been added to the previous knowledge, as well as RT-qPCR and ELISA.

Moreover, once the transgenic mosquito line has been generated, insectary skills have been acquired in mosquito rearing and management, dissection, larval screening and pupal sexing.

A collateral project has been followed, learning the basis of mosquito swarming, experiments setting and analysis using infrared lights and cameras.

Actually, during the PhD, involved in a project about the generation of a novel *Wolbachia* strategy to block arboviral infection and transmission in *Culex* mosquitoes using *w*Mel endosymbiont. This project is giving the possibility to acquire confidence in cell line maintenance and knowledges about insect cell line generation and the maintenance of *Wolbachia* endosymbiont in insect cell lines. Transfection experiments have been also performed to generate the novel system, trying to infect *Culex* cells with *Wolbachia melanogaster*. Since the project is focused on *Culex* mosquitoes, the insectary skills has been expanded also in the rearing of this species and also in the rearing of *Drosophila melanogaster* flies.

During the abroad period in the CVR centre of Glasgow, other expertise about *Wolbachia* endosymbiont maintenance *in vivo*, in mosquito, novel transfections from insect eggs and cell lines and techniques as FISH have been experienced.

For what concerns data analysis, some skills have been acquired during the master training and the PhD about Excel, Snapgene and Graphpad softwares but also on tools like BLAST, Primer3 and mfold.