Dr. Mariano is a post-doctoral researcher who works at the Laboratory of Comparative Anatomy and Cytology of Di.S.Te.B.A. (University of Salento). Currently she is working within the PRIN (Research projects of national interest) “Ubiquitin E3 ligases as critical sensors in physiological and pathological conditions” to provide new insights on how cells employ E3 ubiquitin ligases to sense cellular stresses and to activate survival processes in a selective and timely manner.
She got the PhD title in Biology and Biotechnology (XXVIII cycle) discussing a thesis entitled “Interaction between nanomaterials and biological systems” and working at the Laboratory of Comparative Anatomy and Cytology of Di.S.Te.B.A. (University of Salento). The topic of her PhD work was in the field of nanotechnology, in particular her research focused on the interactions between nanoparticles (different types from metallic to non metallic) *in vivo* and *in vitro* model systems. She carried out several studies to evaluate the effects and the efficiency of internalization of nanoparticles and their subcellular localization.
She is also part of the section of National Institute of Nuclear Physics (INFN) of Lecce, which collaborates in the development of a proton therapy protocol in synergy with the sections of Turin and CNR in Pisa. In particular, she carries out electron microscopy studies to evaluate the efficiency of internalization of metal nanoparticles and their subcellular localization, taking part in experimental protocols at the section of the Pisa CNR (Institute of Clinical Physiology).
She also has knowledge in molecular, biochemical and microscopic biology and in cell cultures.
During the master degree internship at the Laboratory of Medical Genetics at "John Paul II" Oncological Hospital of Lecce, she has carried out research in the field of pharmacogenetics, in particular on the oncogene KRAS mutations in colorectal cancer, assessing KRAS mutation status by pyrosequencing method on a two-year case series of histological samples of patients with CRC.
Furthermore, he has perfected an alternative method (NEW FAST COLD PCR) to increase the sensitivity of the identification of mutations of Kras through DNA sequencing.
She is a member of SIFB (Italian Society for Photobiology).