

Curriculum vitae

Name: KATIA GRILLONE

Gender: Female; **Date and Place of Birth:**

Citizenship: Italian

Work address: University "Magna Graecia" of Catanzaro (UMG), Europa Avenue, 88100, Catanzaro, Italy

Personal profile

Fast learner, motivated and a good worker; experience in working independently in the laboratory; ability to manage different research projects and to work in a team, good communication skills. Strong passion and interest in oncogenomic studies.

Education:

2019- today: Postgraduate Specialization in Medical Genetics. Mater Domini UOC, Catanzaro

2014- 2017: PhD in Molecular and Translational Oncology, Magna Graecia University of Catanzaro

2012 – 2014: Master's Degree: Medical Biotechnologies (LM-9), University of Torino, final grade: 110/110

2009 – 2012: Bachelor's Degree: Biological Science and Technologies (L-2), UNICAL, final grade 110/110 with honors

Research experience:

2018-today: Postdoctoral Research Fellow at the Medical Oncology laboratory , UMG. PI: Prof. Pierfrancesco Tassone

Main focus of research activity: functional characterization of mechanisms involved in multiple myeloma progression and drug response, including functional studies concerning the role of selected lncRNAs in the tumorigenesis through the application of CRISPR-Cas9 technology to induce the knock-out of the lncRNA whose function need to be explored.

2014 – 2017: PhD student in Molecular Oncology laboratory, UMG. Supervisor: Prof. Giuseppe Viglietto

Main focus of the PhD research activity: genetic characterization of colorectal cancer (CRC) patients through Ion Torrent Next Generation Sequencing technology, detection of new genomic variants involved in CRC initiation, progression and metastatization and their *in vitro* functional validation.

International stage:

April 2017-July 2017: internship period in the Translational Cancer Genomics laboratory at Wellcome Trust Sanger Institute (Cambridge, UK). *Supervisor:* Dr. Mathew Garnett, PhD.

Main research activity: Investigation of patient-specific genetic vulnerabilities through genome wide CRISPR-Cas9 "essentiality screening" performed on patients-derived 3D colon organoids.

2012 – 2014 master thesis: Oncogenomics laboratory at the Institute for Cancer Research and Treatment -IRCCS (Candiolo) *Supervisor:* Prof. Enzo Medico, M.D.

Thesis title: "Identification of NEDD8 pathway inhibition as an effective therapeutic strategy for colorectal cancer"

Technical skills and competences:

Cellular biology: 2D and 3D cell cultures: transfection, drug screening, cell viability assays, apoptosis assays, clonogenic assay, soft agar assay, genetic manipulation through CRISPR-Cas9 technology. Lentivirus production and infection of 2D and 3D cell lines. Microbiology: liquid and solid culture of bacteria, isolation and transformation.

Molecular biology: DNA extraction from tissue- FFPE- peripheral blood and cell lines, plasmid DNA extraction, DNA purification, DNA gel analysis- quantification and extraction, PCR; RNA extraction, reverse transcription, real time-PCR; protein extraction and quantification, WB analysis; genomic library preparation for NGS; template preparation for NGS on Ion Chef system, sequencing on Ion Proton system.

Cytogenetics: cell culture preparation for karyotype analysis, conventional chromosomal banding, acquisition of banded chromosome images and karyotype analysis by using Cyto Vision software.

Computer Skills: Good knowledge of Microsoft ® Windows environments, Office package (Word, Excel, PowerPoint), database as NCBI, Ensembl, COSMIC, cBio Portal etc. Software as Image J, FichTV, GraphPad Prism etc.

Languages: Italian, English.

Publications:

1. *Risk Alleles for Multiple Myeloma Susceptibility in ADME Genes.* Cells. 2022
2. *miR-22 Modulates Lenalidomide Activity by Counteracting MYC Addiction in Multiple Myeloma.* Cancers (Basel). 2021
3. *Generation of human induced pluripotent stem cell lines (UNIMGi003-A and UNIMGi004-A) from two Italian siblings affected by Unverricht-Lundborg disease.* Stem Cell Res. 2021
4. *miRNAs and lncRNAs as Novel Therapeutic Targets to Improve Cancer Immunotherapy.* Cancers (Basel). 2021
5. *Therapeutic afucosylated monoclonal antibody and bispecific T-cell engagers for T-cell acute lymphoblastic leukemia.* J Immunother Cancer. 2021
6. *Generation of iPSC lines from two patients affected by febrile seizure due to inherited missense mutation in SCN1A gene.* Stem Cell Research. 2020
7. *Non-coding RNAs in cancer: platforms and strategies for investigating the genomic "dark matter".* J Exp Clin Cancer Res. 2020
8. *Exploiting MYC-induced PARPness to target genomic instability in multiple myeloma.* Haematologica. 2020
9. *Anti-tumor Activity and Epigenetic Impact of the Polyphenol Oleacein in Multiple Myeloma.* Cancers (Basel). 2019
10. *Trabectedin triggers direct and NK-mediated cytotoxicity in multiple myeloma.* J Hematol Oncol. 2019
11. *From Single Level Analysis to Multi-Omics Integrative Approaches: A Powerful Strategy towards the Precision Oncology.* High Throughput. 2018
12. *Identification of different mutational profiles in cancers arising in specific colon segments by next generation sequencing.* Oncotarget. 2018
13. *Next-generation sequencing analysis of receptor-type tyrosine kinase genes in surgically resected colon cancer: identification of gain-of-function mutations in the RET proto-oncogene.* J Exp Clin Cancer Res. 2018
14. *Efficacy of NEDD8 Pathway Inhibition in Preclinical Models of Poorly Differentiated, Clinically Aggressive Colorectal Cancer.* J Natl Cancer Inst. 2017