

Education

- 01.04.2011: PhD in Biochemistry, Molecular Biology and Bioinformatic, Thesis Title: *“Mitochondrial Biogenesis and Genetic in Type I Endometrial Carcinoma”*. Supervisor: Prof. Gadaleta, Dept. of Biochemistry and Molecular Biology “Ernesto Quagliariello”, University of Bari.
- 12.12.2007: Master’s degree in “Medical Biotechnologies and Molecular Medicine” (final mark 110/110 cum laude). Thesis title: *“Depletion of mitochondrial DNA in malignant transformation in epithelial prostate cells”*. Supervisors: Prof. Gadaleta and Dr. Moro, Dept. of Biochemistry and Molecular Biology “Ernesto Quagliariello”, University of Bari.
- 25.07.2005: Bachelor’s degree in “Medical Biotechnology” (final mark 110/110 cum laude). Thesis title: *“Study of alterations of dystrophin complex proteins by AQP4 knockdown in astrocytes primary culture”*. Supervisors: Prof. Svelto and Dr. Nicchia, Dept of General Physiology, University of Bari

Research experience

- Mar 2020- Today: Tenure-Track Researcher in Cell Biology, University of Salento (LE), Scientific Coordinator: Prof.ssa Cecilia Bucci. Working on “Biogenesis and function of organelles in pathological and physiological conditions”
- Nov 2017 – Mar 2020: Post-Doctoral Fellow on the AIRC project “Gaining tumorigenic properties: involvement of the small GTPase Rab7 and of its effector proteins”, University of Salento (LE), (Tutor Prof. C. Bucci)
- June 2016 - Oct 2017: Post-Doctoral Fellow “Epithelial-Mesenchymal Transition in ovarian cancer cells: identification of markers and inductors”, University of Salento (LE), (Tutor Prof. C. Bucci)
- Jan 2014 – Dec 2015: Post-Doctoral Fellow *Fondazione Umberto Veronesi*, University of Salento (LE). “Mitochondria in Progression of Epithelial Ovarian cancer” (Tutors Prof. V. Zara and C. Bucci)
- Jan 2012- Dec 2013: Post-Doctoral Fellow with AIRC Biennial “*Maria Antonietta Carluccio*” Fellowship, University of Bologna, U.O. Medical Genetics, Pol. S.Orsola-Malpighi (BO), “MiPEO-Mitochondrial in Progression of Endometrial and Ovarian Cancer” (Tutor Prof. G. Gasparre)

TRACK RECORD

I started PhD at the Department of Biochemistry and Molecular Biology “E. Quagliariello” with Prof. Maria Nicola Gadaleta. My PhD project hence focused on mitochondrial biogenesis and genetic in endometrial cancer of type I. I applied techniques such as western blotting, real-time PCR and citrate synthase activities assay. In the beginning of my PhD training period, I had the chance to closely collaborate with Prof. Giuseppe Gasparre and Prof. Giovanni Romeo at the Unit of Medical Genetics Pol. S. Orsola-Malpighi, Bologna. Thanks to these collaborations, I carried out a fairly large screening of endometrial cancer samples searching for mitochondrial mutations. I hence learnt to master techniques such as sequencing, PCR, nucleic acid electrophoresis, western blotting. The fruitful collaborations have led to the identification of large panel of mitochondrial mutations in endometrial cancer which are associated with defective mitochondrial energy metabolism. From February 2011 to December 2011, I started my post-doctoral project in collaboration with European Genetics Foundation working on progression of type I endometrial cancer and mutations in mitochondrial DNA. In November 2011, I gained AIRC biennial “*Maria Antonietta Carluccio*” fellowship with MiPEO- Mitochondria in Progression of Endometrial and Ovarian Cancer- project. In January 2012, thanks to MiPEO, I started also my research activity on ovarian cancer and mitochondrial DNA mutations in resistance to chemotherapy treatment, I learnt to supervise a research team and I collaborated with gynecologists, pathologists and oncologists of Pol. S.Orsola. In two years MiPEO become multicenter project by adding Dept. of Obstetrics and Gynecology, Dr. V. D. Mandato, Arcispedale S.Maria Nuova, Reggio Nell’Emilia, and Dept. of Biological and Environmental Sciences and Technologies (DiSTeBA), Prof. V. Zara, Unisalento, Lecce. In January 2014 I won Fondazione Umberto Veronesi Fellowship to work on project of MiPEO-Mitochondria in Progression of Epithelial Ovarian cancer at University of Salento (DiSTeBA) in the lab of Prof. V. Zara. Thanks to these collaborations, I learnt enzymatic/spectrophotometric assays and use of oxygraph to assess oxygen consumption and OXPHOS. In January 2015, I won again Fondazione Umberto Veronesi Fellowship and I started collaboration with Prof. Cecilia Bucci of DiSTeBA working on role of RAB7 protein in cancer and in chemoresistance. From June 2016 to March 2020, I was post-doc in Lab of Cell Biology, directed by Prof. Cecilia Bucci. From March 2020 I am Tenure Track Researcher (SSD/BIO13) and I work on RAB7 in chemoresistance to cisplatin, extracellular vesicle secretion and mitochondria-lysosomes crosstalk in neurodegenerative and cancer disease.