

Europass Curriculum Vitae

Personal information

First name/Surname **Barbara Vizio**

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Nationality Italian

Date of birth 08/05/1975

Gender Female

Current employment / Occupational field

Work experience

- **Present position: from January 2007**, Technician with research functions in the in the Laboratory of "Cellular and Molecular Biology applied to critical states of Internal Medicine" (Prof. G. Montrucchio) at the Department of Medical Sciences, University of Turin.
- **April 2001 - June 2007**: supplementary teaching (General Pathophysiology) in the Nursing Degree School, University of Turin.
- **July - December 2006**: Research grant for the research project: "Endothelial and smooth muscle cells alterations in atherosclerosis: role of cholesterol oxidation products" in the Laboratory of General Pathology (supervisor Prof. Giuseppe Poli) at the Department of Clinical and Biological Sciences, University of Turin.
- **January - June 2006**: Scholarship from Piedmont Regional Government (Regione Piemonte) for the Research Project: "Oxidated lipids and inflammation in Atherosclerosis: in vitro and in vascular risk patients", in the Laboratory of General Pathology (supervisor Prof. Giuseppe Poli) at the Department of Clinical and Biological Sciences, University of Turin.
- **March - April 2005**: guest scientist at the Department of Biochemistry and Molecular Biology, Faculty of Medicine, University of Cadiz (Spain) – Research Project: "Mechanisms of mitochondrial dysfunction in animal models of Parkinson's disease"
- **November 2001 - October 2005**: PhD grant for study on the role of lipid oxidation products in the programmed cell death. Experimental and Clinical Pharmacology and Therapy, University of Turin
- **November 2001 - February 2002**: Dompé Pharmaceutical funding for studies on the research project: "Study of DF1970 activity on cytolysis and neutrophils infiltration in rat liver subjected to ischemia-reperfusion. Further experimentation with the drug DF1912A to small doses." at Department of Clinical and Biological Sciences, University of Turin.

Education and training

- **July 2009 - July 2014:** Clinical Pathology Specialization School, University of Turin. Final grade:70/70 with honors, Thesis argument "Valutazione del ruolo della trombopoietina nell'attivazione piastrinica in pazienti diabetici di tipo I".
- **November 2001 - October 2005:** PhD in Experimental and Clinical Pharmacology and Therapy, University of Turin, Thesis argument: "Role of lipid oxidation products in the dynamics of programmed cell death".
- **November 2001:** qualifying examination as Professional Biologist
- **November 1994 - November 2000:** Degree in Biological Sciences at the Faculty of Mathematical, Physical and Natural Sciences, University of Turin. Final Grade: 109/110, Thesis argument: "Role of Leptin in the neoplastic pathology"

Language skills and competences**Italian**

Mother tongue

Other languages

Self-assessment

*European level***English****French**

Understanding				Speaking				Writing	
Listening		Reading		Spoken interaction		Spoken production			
C1	Proficient user	C1	Proficient user	B1	Independent user	B2	Independent user	B2	Independent user
A2	Basic user	B1	Independent user	A2	Basic user	A2	Basic user	A2	Basic user

Technical skills and competences

Biochemistry: oxidative stress parameter analysis, protein evaluation e enzyme kinetics, HPLC, immunoenzymatic assay (ELISA), mitochondrial oxygen consumption rate (Seahorse).

Morphology: histochemistry, immunocyto-histochemistry and immunofluorescence techniques. Optical and confocal laser microscopy.

Molecular Biology: protein extraction and analysis with Western Blotting and Immunoprecipitation; DNA and RNA/miRNA isolation, retrotranscription and Real Time PCR.

Cellular Biology: cell culture and Flow cytometry, from sample preparation to data acquisition and analysis; EV isolation and characterization.

Computer skills and competences

Good formation in Windows, Microsoft Office (Word, Excell, Power Point), GIMP2, GraphPad, SPSS, EndNote programs. Ability to use bibliographic databases (PUBMED).

Scientific and Research activity

The scientific activity is documented by 32 papers published in international journals (H-index= 18, 1020 citations) and has turned to these main research areas:

- role of leptin in cancer cachexia induced by colorectal, mammary and ovarian tumors;
- study of the mechanisms involved in the process of programmed cell death (apoptosis) due to alteration of redox balance in different human pathologies (from fibrosis to cancer): transduction and transcription of the cellular signal induced by cholesterol oxidation compounds and by lipid peroxidation aldehyde products;
- influence of oxidative stress and cholesterol oxidation products on the development of atherosclerosis: their ability in inducing inflammation and fibrosis processes and possible pharmaceutical intervention with antioxidants;
- involvement of both tumor's microenvironment and systemic factors in the immune evasion and tumor progression in pancreatic ductal adenocarcinoma: immunity modulation by surgery and chemotherapy and ability of improving survival introducing immunotherapy;
- study of the biological activity of Thrombopoietin (THPO) on platelet and leukocyte activation and its involvement in critical illness as sepsis, acute pancreatitis, diabetes and acute respiratory disease from SARS-CoV-2 (COVID-19)
- biomolecular research study of the immunopathological mechanisms that regulate the transformation and growth process of hepatocellular carcinoma in viral, alcoholic and NASH cirrhosis.
- evaluation of diagnostic accuracy and prognostic capacity of miRNAs and other circulating biomarkers for the diagnosis of heart failure in critically ill patients;
- involvement of mitochondrial dysfunction in the pathogenesis of platelet hyper-activation in septic patients;
- study of the role of extracellular vesicles (EV) in cardiovascular alteration during sepsis/septic shock in burned patients.

Participation in over 70 training events, including national and international conferences, and professional updating courses.

I also participates in the training of undergraduates, PhD students and in the activity of SCU "Medicina Interna 2 U" of the AOU "Città della Salute e della Scienza" of Turin.