

PERSONAL INFORMATION **Valentina Pace**

WORK EXPERIENCE

November 2019- April 2022

PhD Student

Department of Experimental Medicine - "La Sapienza" University of Rome – Rome, -
Piazzale Aldo Moro 5, 00185 Roma

Biochemistry and Molecular Biology Institute (IBBC)
Italian National Research Council (CNR)
Via Ercole Ramarini 32, 00015 Monterotondo scalo (RM), Italia

Clinical and molecular study of GLUT1 deficiency syndrome related phenotypes: NGS data analysis and characterization of the regulatory mechanisms of SLC2A1 gene expression under the supervision of Prof. Viviana Caputo and Dr. Chiara Parisi.

Functional studies of human K⁺ channels KCNH1 and KCNK4 and their role in human pathogenesis under the supervision of Prof. Viviana Caputo and Dr. Chiara Parisi.

Business or sector Medical

January 2017 – November 2019

Scholarship

Cell Biology and Neurobiology Institute (IBCN)
Italian National Research Council (CNR)
Via Ettore Ramarini 32, 00015, Rome, Italy

Characterization of cyclin D3 in the onset and in the regulation of pathological cardiac hypertrophy on a mouse model of Transverse aortic constriction (TAC) under the supervision of Dr. R. Rizzi.

Business or sector Medical

January 2015 – January 2017

Undergraduate student

Cell Biology and Neurobiology Institute (IBCN)
Italian National Research Council (CNR)
Via Ettore Ramarini 32, 00015, Rome, Italy

Characterization of the effect of Givinostat, an HDACi of recent clinical interest, on a mouse model of myocardial infarction (AMI) and dystrophic cardiomyopathy (*Mdx* mice), and, in particular, the interplay with the endothelial-mesenchymal transition (EndoMT) mechanism. Characterization of Givinostat effect on hippocampus-dependent memory and synaptic plasticity using genome wide analysis (ILLUMINA), histological and molecular approach under the supervision of Dr. R. Rizzi.

Business or sector Medical

September 2009 – June 2010

Undergraduate student

University of Rome "Tor Vergata",
Via della ricerca scientifica 1, 00133 Rome, Italy

Role of BCG in in the immune response to vaccination against the Hepatitis B virus, under the supervision of Dr. M. Mattei, through the analysis and measurement of cytokines and antibodies specific for HBsAg.

Business or sector Medical

EDUCATION AND TRAINING

January 2017 **Master Degree in Neurobiology**
 University of Rome "Sapienza", Piazzale Aldo Moro 5, 00185 Rome, Italy
 Cell Biology and Neurobiology Institute, Italian National Research Council (IBCN-CNR), - Via del Fosso di Fiorano 64, 00143 Rome

Experimental Thesis: "HDACi (Givinostat) effect on hippocampus-dependent memory and synaptic plasticity". Under the supervision of Dr. R. Rizzi.

May 2013 **Bachelor's Degree in Human Biology**
 University of Rome "Tor Vergata",
 Via della ricerca scientifica 1, 00133 Rome, Italy

Experimental Thesis: "BCG modulation in the immune response to vaccination against the Hepatitis B virus in CD1 mice." under the supervision of Prof. Maurizio Mattei.

PERSONAL SKILLS

Mother tongue(s) Italian

Other language(s)

	UNDERSTANDING		SPEAKING		WRITING
	Listening	Reading	Spoken interaction	Spoken production	
English	B2	B2	B2	B2	B2
French	B2	B2	B2	B2	B2
Spanish	C1	C1	C1	C1	C1

Levels: A1/A2: Basic user - B1/B2: Independent user - C1/C2 Proficient user
[Common European Framework of Reference for Languages](#)

Communication skills Good communication skills acquired during my experience as an undergraduate student, in particular:

- collaborating with other scientists to define aims, methodologies and conclusions
- communicating politely and professionally to all professional levels competitive attitude, self-motivation and strong work ethic

Organisational / managerial skills Excellent organizational skills:

- expert in document preservation, presentation and interpretation of data

Job-related skills	<p>Data interpretation and statistical analysis</p> <p>ANIMAL MODELS: Experimental cardiac and neural micro-surgery. Acute Myocardial Infarction, Ischemia and Reperfusion, Transverse Aortic Constriction, Aortic cannulation for Langendorff, Abdominal Aortic Cannulation for Cardiac Perfusion. Hind limb Ischemia, Cardiotoxin. Echocardiography, Hemodynamic Measurement. Skill in the manipulation of mice and genotyping; experience with transgenic mouse models. Stereotaxic Surgery.</p> <p>CELL BIOLOGY: multiple cell lines culture (HepG2, HeLa, HEK293) and primary cultures. Isolation and analysis of cardiomyocytes, cardiac fibroblasts and cardiac stem cells; muscle differentiation (cardiac/skeletal) stem cells; immunofluorescence, immunohistochemistry and hybridization; proliferation assays and apoptosis.</p> <p>MOLECULAR BIOLOGY: Genomic DNA extraction and purification (mini and maxi- preps) and agarose gel electrophoresis. Extraction and purification of RNA, PCR (conventional, RT-PCR) and qRT-PCR (Taqman based systems and Sybr). Protein purification assay, gel electrophoresis (SDS-PAGE and Western blot), interaction protein-protein by Immunoprecipitation, Proximity Ligation Assay and ELISA assay.</p> <p>MICROSCOPY: Immunostaining, immunohistochemistry, light and confocal microscopy.</p>
Digital skills	<p>Very good knowledge of Windows operating system, Office (Word, Excel, PowerPoint, Movie Maker), Prism Graphpad, Adobe Photoshop CS, Image J, software for molecular analysis (Primer 3, Ensembl, UCSC, NCBI, PUBMED, OMIM, BLAST) and Software for image analysis (IAS, Delta Systems Italy; Image Analysis software)</p>
Driving licence	B

Courses

- “The use of statistics in Biomedical Research”, AISAL and IBCN-CNR, June 2015.
- “Introduction training for animal experimentation”, Mario Negri Institute, Milan, November 2015.
- “Training Course for Workers - 2015/28”, CNR-IBCN, December 2015
- “ImageJ training course”, “Tor Vergata” University, Rome, May 2016
- NGS, varianti geniche e studi funzionali. L'esoma nella diagnostica. L'omica e le discipline biomolecolari, Scuola Medica Ospedaliera, Rome October 2019

Publications

Surface functionalization of acrylic based photocrosslinkable resin for 3D printing applications.

Ronca A., Maiullari F., Milan M., **Pace V.**, Gloria A., Rizzi R., De Santis., Ambrosio L. Bioactive Materials., Apr 2017

Doi: 10.1016/j.bioatmat.2017.04.002

Givinostat reduces adverse cardiac remodelling through regulating fibroblasts activation.

Milan M., **Pace V.**, Maiullari F., Chirivi M., Baci D., Maiullari S., Madaro L., Maccari S., Stati T., Marano G., Frati G., Puri PL., De Falco E., Bearzi C., Rizzi R. Cell Death and Disease. Jen 2018 .

Doi: 10.1038/s41419-017-0174-5.

A multi-cellular 3D bioprinting approach for vascularized heart tissue engineering based on HUVECs and iPSC-derived cardiomyocytes.

Maiullari F, Costantini M, Milan M, **Pace V**, Chirivi M, Maiullari S, Rainer A, Baci D, Marei HE, Seliktar D, Gargioli C, Bearzi C, Rizzi R. Sci Rep. Sep 2018 .

Doi: 10.1038/s41598-018-31848-x.

Extracellular Vesicles from Skeletal Muscle Cells Efficiently Promote Myogenesis in Induced Pluripotent Stem Cells

Baci D, Chirivi M, **Pace V**, Maiullari F, Milan M, Rampin A, Somma P, Presutti D, Garavelli S, Bruno A, Cannata S, Lanzuolo C, Gargioli C, Rizzi R, Bearzi C. Cells. Jun 2020.

Doi: 10.3390/cells9061527.

Intermittent β -adrenergic blockade downregulates the gene expression of β -myosin heavy chain in the mouse heart.

Maccari S, Pace V, Barbagallo F, Stati T, Ambrosio C, Grò MC, Molinari P, Vezzi V, Catalano L, Matarrese P, Patrizio M, Rizzi R, Marano G. Eur J Pharmacol. Sep 2020

Doi: 10.1016/j.ejphar.2020.173287.

***In vivo* organized neovascularization induced by 3D bioprinted endothelial-derived extracellular vesicles.**

Maiullari F, Chirivi M, Costantini M, Ferretti AM, Recchia S, Maiullari S, Milan M, Presutti D, **Pace V**, Raspa M, Scavizzi F, Massetti M, Petrella L, Fanelli M, Rizzi M, Fortunato O, Moretti F, Caradonna E, Bearzi C, Rizzi R.. Biofabrication. Apr 2021.

Doi: 10.1088/1758-5090/abdacf. PMID: 33434889.

Potassium Channel KCNH1 Activating Variants Cause Altered Functional and Morphological Ciliogenesis.

Napoli, G., Panzironi, N., Traversa, A., Catalanotto, C., **Pace, V.**, Petrizzelli, F., Giovannetti, A., Lazzari, S., Cogoni, C., Tartaglia, M., Carella, M., Mazza, T., Pizzuti, A., Parisi, C., & Caputo, V. Molecular neurobiology. Aug 2022.

Doi: 10.1007/s12035-022-02886-4