

ALLEGATO B**UNIVERSITÀ DEGLI STUDI DI MILANO**

selezione pubblica per n.1 posto/i di Ricercatore a tempo determinato ai sensi dell'art.24, comma 3, lettera a) della Legge 240/2010 per il settore concorsuale 05/D1 - Fisiologia , settore scientifico-disciplinare BIO/09 - Fisiologia presso il Dipartimento di Bioscienze,(avviso bando pubblicato sulla G.U. n. _50_ del 30/06/2020_) Codice concorso 4383

**Patrizia Benzoni
CURRICULUM VITAE****INFORMAZIONI PERSONALI (NON INSERIRE INDIRIZZO PRIVATO E TELEFONO FISSO O CELLULARE)**

COGNOME	BENZONI
NOME	PATRIZIA
DATA DI NASCITA	20/07/2020

**INSERIRE IL PROPRIO CURRICULUM
(non eccedente le 30 pagine)**

Education	
Dates	From January 2013 to December 2015
Title of qualification awarded	"Doctor Europeus" - PhD in Technology for Health
Name and type of organisation providing education and training	Università degli Studi di Brescia, Brescia, Italy
Thesis	<i>"Engineered Microsystems to improve stem cell-derived cardiomyocyte's maturation: new tools for human cardiac disease modelling".</i>
Name and address of supervisor	Reference: Prof. Emilio Sardini (emilio.sardini@unibs.it); Prof. Marco Presta (marco.presta@unibs.it) and Prof. Patrizia Dell'Era (patrizia.dellera@unibs.it).
Dates	From September 2009 to July 2011
Title of qualification awarded	Second level Degree (Master) in "Medical Biotechnology" (score 110/110 cum laude)
Thesis	<i>"Study of stem cell differentiation toward cardiac phenotype"</i>
Name and type of organisation providing education and training	School of Medicine, Università degli Studi di Brescia, Brescia, Italy Reference: Prof. Patrizia Dell'Era (patrizia.dellera@unibs.it)
Level in national or international classification	Master
Dates	From September 2006 to July 2009
Title of qualification awarded	First level Degree (Bachelor) in "Biotechnology" (score 110/110 cum laude)
Thesis	<i>"Generation of a mouse prostate cancer cell line transfected with hFGFR1"</i>
Name and type of organisation providing education and training	School of Medicine, Università degli Studi di Brescia, Brescia, Italy
Level in national or international classification	Bachelor
Dates	From 2001 to July 2006

Title of qualification awarded	High School Diploma (score 100/100)
Name and type of organisation providing education and training	Scientific High school, "A.Calini", Brescia, Italy
Level in national or international classification	Diploma
Training and International Experience	
Dates	From May 2015 to October 2015
Name and type of organisation providing education and training	Department of Mechanical and Process engineering, ETH, Zurich, Switzerland
Principal subjects/occupational skills covered	PhD internship in Bioengineering
Name and address of supervisor	Prof. Chiara Daraio (daraio@caltech.edu) from Department of Mechanical and Process engineering, ETH, Zurich, Switzerland
Dates	From September 2009 to July 2011
Name and type of organisation providing education and training	Unit of General Pathology and Immunology, Department of Biomedical Sciences and Biotechnology, School of Medicine, Università degli Studi di Brescia, Brescia, Italy.
Principal subjects/occupational skills covered	While attending University classes, I worked as a training student in the University laboratories, Section of General Pathology and Immunology. My research project was focused on the modulation of <i>in vitro</i> cardiac differentiation of mesenchymal cells isolated from human adipose tissue (AT-MSC). Part of the results obtained was included in my Master thesis.
Name and address of supervisor	Prof. Patrizia Dell'Era (patrizia.dellera@unibs.it) and Prof. Marco Presta (marco.presta@unibs.it) both from Unit of General Pathology and Immunology, Department of Biomedical Sciences and Biotechnology, School of Medicine, Università degli Studi di Brescia, Italy.
Dates	From February 2011 to May 2011
Name and type of organisation providing education and training	Erasmus Placement at the Institute for Bioengineering of Catalonia (IBEC), Barcelona, Spain
Principal subjects/occupational skills covered	In order to extend my knowledge about stem cell and to complete my work of thesis I attended part of my master degree training at the Institute for Bioengineering of Catalonia in the laboratory of Prof. Angel Raya. During this period, I have learned how to generate and work with induced pluripotent stem cell (iPSC). From my personal point of view, the three months spent in Prof. Raya's Lab, have been a highly qualifying experience that I carried out enthusiastically.
Name and address of supervisor	Research Professor Angel Raya (araya@ibecbarcelona.eu) group leader of the unit "Control of stem cell potency", Institute for Bioengineering of Catalonia, Barcelona, Spain
Dates	From September 2008 to July 2009
Name and type of organisation providing education and training	Unit of General Pathology and Immunology, Department of Biomedical Sciences and Biotechnology, School of Medicine, Università degli Studi di Brescia, Brescia, Italy
Principal subjects/occupational skills covered	During my training, I attended the laboratory daily and I performed the common tasks for laboratory management. During this period, I learned several techniques, focusing on the isolation of Single Chain Fragment Variable Antibodies (scFv) directed against FGFR1 to be used as a novel tool for anti-angiogenetic and/or anti neoplastic therapy. In particular, an scFv Phage Display Library was screened, several phages were isolated, and some of the positive clones were produced on a small purification scale. After several tests aimed to determine their specificity and sensitivity, the most promising scFv was purified on a large scale and characterized for its capacity to bind FGFR1, and to inhibit FGFR1-mediated biological activity. At the end of this project I discussed my thesis to complete First Level Degree.

Name and address of supervisor	Dott. Roberto Ronca (roberto.ronca@unibs.it) and Prof. Patrizia Dell'Era (patrizia.dellera@unibs.it) both from Unit of General Pathology and Immunology, Department of Biomedical Sciences and Biotechnology, School of Medicine, Università degli Studi di Brescia, Italy.									
Work experience										
Dates	From January 2016 up to date									
Name and type of organisation providing education and training	Post doc position with grant, Università degli Studi di Milano									
Principal subjects/occupational skills covered	My research project is presently focused on the generation of in vitro cardiomyocyte model using induced pluripotent stem cells derived from patients with Caveolinopathies. To predict the risk of developing life threatening cardiac diseases in patients carrying CAV-3 variants previously associated with limb-girdle muscular dystrophy, we generate cellular models of increasing complexity which will allow us to unveil the molecular basis of altered cellular excitability that can predispose patients to arrhythmias and/or cardiomyopathies.									
Name and address of supervisor	Prof. Andrea Barbuti (andrea.barbuti@unimi.it) from Università degli Studi di Milano, Italy									
Dates	From October 2011 to May 2012									
Name and type of organisation providing education and training	Scholarship at Humanitas Research Institute									
Principal subjects/occupational skills covered	The project that was entrusted to me concerns about the characterization of cardiomyocytes obtained after differentiation of induced pluripotent stem cell (iPSC) as in vitro models, in order to study specific cardiac disease such as Dilated Cardiomyopathy, CPVT and atrial fibrillation.									
Name and address of supervisor	Dott. Elisa di Pasquale and Prof. Gianluigi Condorelli from Istituto Clinico Humanitas, Rozzano (MI) and Prof. Patrizia Dell'Era (patrizia.dellera@unibs.it) from Università degli Studi di Brescia, Italy.									
Dates	From September 2010 to September 2011									
Name and type of organisation providing education and training	Tutor for students in Biotechnology									
Principal subjects/occupational skills covered	Tutor for incoming students and for promotional activities of the applicant students in Biotechnologies, Università degli Studi di Brescia									
Name and address of supervisor	Università degli Studi di Brescia, Brescia, Italy									
Personal skills and competences										
Mother tongue(s)	Italian									
Other language(s)										
Self-assessment		Understanding				Speaking				
European level (*)		Listening		Reading		Spoken interaction		Spoken production		
English		C1	Independent User	C1	Independent User	C1	Independent User	C1	Independent User	C1
German		A2	Basic user	A2	Basic user	A1	Basic user	A2	Basic user	A1
	(*) Common European Framework of Reference for Languages									
Social skills and competences	End-oriented work capacity, problem-solving attitude, self-respect and self-reliance, ability to establish and maintain good working relations. As a research assistant in research laboratories I got used to work in a team and collaborate with more experienced people.									

Organisational skills and competences	Organised person, independent, accurate, able to administrate and to follow work projects, responsible and reliable.
Technical skills and competences Molecular Biology	Nucleic acids extraction and purification from cells and tissue Retro-Transcription PCR quantitative PCR Nucleic acids Electrophoresis Whole-mount in situ Hybridization Bacterial cultures and Transformation Cloning and expression (restriction and plasmid ligation) Mini and Midi-Prep
Cell Biology	Mammalian Cell culture maintenance Transfection of Cell culture Mouse and Human Embryonic Stem Cell maintenance and differentiation through Embryoid Bodies formation Generation of induced pluripotent stem cell, maintenance, characterization and differentiation Adipose Tissue-derived Mesenchymal Stem Cell maintenance Cardiomyocyte isolation from heart chicken, mice and rat embryo Endothelial cell isolation from umbilical human vein Fibroblasts isolation from mouse embryos
Biochemical Techniques	Immunocytochemistry SDS-page protein Electrophoresis Western Blot analysis Production of recombinant proteins from bacterial cultures Proteins purifications Extraction of cytoplasmic/nuclear proteins Immunoprecipitation assay
Computational Biology	BLAST, Ensemble, Primer3, NCBI Optical and Fluorescence Microscopy and relative image acquisitions
Electrophysiology	Patch-clamp technique Current clamp/voltage clamp mode. Micro-electrodes arrays
Computer skills and competences	Excellent computer proficiency in: Editing: Microsoft Office, PC Operation Systems: Windows XP, Windows Vista , Windows 7 Networking: Windows Explorer, Mozilla Firefox Graphics softwares: Adobe Photoshop, ImageJ Others: iCycler iQ Optical System Software, REST, AxioVision Rel 4.7 Software, Image ProPlus Software, Origin Software, Clampfit software
Driving licence	Italian Driving License type B, car owner
Scientific Publication	
	ORCID iD http://orcid.org/0000-0002-3371-3301 H-Index: 7 Google scholar; 6 Scopus
	“Dual Role of miR-1 in the development and function of sinus node” Europace, under review. “Characterization of the hyperpolarization-activated current (I _f) in human iPS-derived cardiomyocytes with pacemaker activity” in preparation

Reference	Cardiovascular Research Aug 2019_ PubMed PMID: 31504264.
Title and authors	"Human iPSC modeling of a familial form of atrial fibrillation reveals a gain of function of If and ICaL in patient-derived cardiomyocytes" Benzoni P, Campostrini G, Landi S, Bertini V, Marchina E, Iacone M, Ahlberg G, Olesen MS, Crescini E, Mora C, Bisleri G, Muneretto C, Ronca R, Presta M, Poliani PL, Piovani G, Verardi R, Pasquale ED, Consiglio A, Raya A, Torre E, Lodrini AM, Milanese R, Rocchetti M, Baruscotti M, DiFrancesco D, Memo M, Barbuti A, Dell'Era P.
Reference	International Journal Molecular Science Aug 2019_ PMCID: PMC6695920.
Title and authors	"Optical Investigation of Action Potential and Calcium Handling Maturation of hiPSC-Cardiomyocytes on Biomimetic Substrates" Pioner JM, Santini L, Palandri C, Martella D, Lupi F, Langione M, Querceto S, Grandinetti B, Balducci V, Benzoni P, Landi S, Barbuti A, Ferrarese Lupi F, Boarino L, Sartiani L, Tesi C, Mack D, Regnier M, Cerbai E, Parmeggiani C, Poggesi C, Ferrantini C, Coppini R.
Reference	Stem Cell Research 2019_ PMID: 31479876.
Title and authors	"Generation of the induced human pluripotent stem cell lines CSSi009-A from a patient with a GNB5 pathogenic variant, and CSSi010-A from a CRISPR/Cas9 engineered GNB5 knock-out human cell line" Malerba N, Benzoni P, Squeo GM, Milanese R, Giannetti F, Sadleir LG, Poke G, Augello B, Croce AI, Barbuti A, Merla G.
Reference	Stem Cell Research March 2018_ PMID: 29304398.
Title and authors	"Generation of human induced pluripotent stem cells (EURACi001-A, EURACi002-A, EURACi003-A) from peripheral blood mononuclear cells of three patients carrying mutations in the CAV3 gene" Meraviglia V, Benzoni P, Landi S, Murano C, Langione M, Motta BM, Baratto S, Silipigni R, Di Segni M, Pramstaller PP, DiFrancesco D, Gazzero E, Barbuti A and Rossini A.
Reference	CIRP Journal of Manufacturing Science and Technology Sept 2017
Title and authors	"Microstructured scaffold for guided cellular orientation: Poly(ϵ-caprolactone) electrospinning on laser ablated titanium collector" Ginestra P, Pandini S, Fiorentino A, Benzoni P, Dell'Era P, Ceretti E.
Reference	Scientific Report 2017 Apr 5;7:45897 _PMCID: PMC5381207.
Title and authors	"Deployable micro-traps to sequester motile bacteria" Di Giacomo R, Krödel S, Maresca B, Benzoni P, Rusconi R, Stocker R, Daraio C.
Reference	Developmental Dynamics · 2016, 245(12):1145-1158 _ PMID: 27599668.
Title and authors	"Human derived cardiomyocytes: A decade of knowledge after the discovery of induced pluripotent stem cells" . Barbuti A, Benzoni P, Campostrini G, Dell'Era P.
Reference	Europace, 2016, 18, iv67–iv76_ PMID: 28011833.
Title and authors	"Human-induced pluripotent stem cell-derived cardiomyocytes from cardiac progenitor cells: effects of selective ion channel blockade" . Altomare C, Pianezzi E, Cervio E, Bolis S, Biemmi V, Benzoni P, Camici G, Moccetti T, Barile L and Vassalli G.
Reference	Procedia CIRP 2016-(49):113–120
Title and authors	"Biomanufacturing of a Chitosan/Collagen Scaffold to Drive Adhesion and Alignment of Human Cardiomyocyte Derived from Stem Cells" . Benzoni P, Ginestra P, Altomare L, Fiorentino A, De Nardo L, Ceretti E, Dell'Era P.
Reference	World Journal of Stem Cells; 2015, 7(2): 329-342 _PMCID: PMC4369490.
Title and authors	"Cardiac disease modeling using iPSC-derived human cardiomyocytes." Dell'Era P, Benzoni P, Crescini E, Valle M, Xia E, Consiglio A and Memo M.
Reference	CNS Neurol Disord Drug Targets. 2013, 12(8):1114-27 _ PMID: 24040813.
Title and authors	"Induced Pluripotent Stem Cell-Based Studies of Parkinson's Disease: Challenges and Promises." Sánchez-Danes A, Benzoni P, Memo M, Dell'Era P, Raya A, Consiglio A
Reference	ISRN Stem Cells, 2013 Feb 28.- ID 674671
Title and authors	"Comparative Analysis of Mesenchymal Stromal Cells Biological Properties." De Luca A, Verardi R, Neva A, Benzoni P, Crescini E, Xia E, Almici C, Calza S, and Dell'Era P.

Reference	International Journal of Molecular Sciences, Phage Display, special issue " Biochemistry, Molecular Biology and Biophysics ". ISSN 1422-0067 PMID: PMC3344278.
Title and authors	"Phage displayed peptides/antibodies recognizing growth factors and their tyrosine kinase receptors as tools for anti-cancer therapeutics." Ronca R., Benzoni P. , De Luca A., Crescini E., Dell'Era P.
Reference	Molecular Cancer Therapeutics, 2010 Dec;9(12):3244-53. PMID: 20940322.
Title and authors	"Anti-angiogenic activity of a neutralizing human single-chain antibody fragment against fibroblast growth factor receptor 1" , Ronca R., Benzoni P. , Leali D., Urbinati C., Belleri M., Corsini M., Alessi P., Coltrini D., Calza S., Presta M. and Dell'Era P.
Conferences and abstracts	
Reference	22 nd SIGU congress, Roma 13-16 th Nov 2019
Title and authors	"Cell modelling to study the severe bradycardia caused by GNB5 in IDDCA syndrome" N. Malerba, P. Benzoni, G. M. Squeo, F. Giannetti, B. Augello, A. Barbuti, G. Merla.
Reference	ABCD Congress Bologna 19-21st Sept 2019
Title and authors	"Cell modelling and electrophysiological characterization to dissect the pathogenic consequences of G-protein beta 5 subunit mutations" N. Malerba, P. Benzoni, G.M. Squeo, F. Giannetti, B. Augello, G. Poke, S. Towner, I.E. Scheffer, L.G. Sadleir, A. Barbuti, G. Merla.
Reference	63 rd annual meeting of the Biophysical Society 3-5 th March 2019
Title and authors	"Loss of Dystrophin Alters Calcium-Handling Maturation in Response to Microenvironment in Hpsc-Cardiomyocytes from Duchenne Muscular Dystrophy Patients." Pioner JM, Coppini R, Santini L, Palandri C, Lupi F, Langione M, Benzoni P, Landi S, Barbuti A, Tesi C, Mack DL, Regnier M, Parmeggiani C, Poggesi C, Ferrantini C.
Reference	Heart Rhythm May 2019
Title and authors	"Studying The Molecular Mechanisms Of Familial Atrial Fibrillation Onset Using Patients' Induced Pluripotent Stem Cells (hiPSC)" Barbuti A, Benzoni P, Landi S, Camprostrini G, Giannetti F, Rocchetti M, Bucchi A, Baruscotti M, DiFrancesco D, Olesen M and Dell'Era P.
Reference	43rd ESC Working Group on Cardiac Cellular Electrophysiology Lisbon- 16-18 th March 2019
Title and authors	"Assessing the arrhythmogenic risk associated with pathological mutations in the Caveolin-3 gene using both heterologous systems and patients' iPSC- cardiomyocytes" . Benzoni P. , Meraviglia V, Rossini A, Gazzero E, Baratto S, Milanese R, Bucchi A, Baruscotti M, DiFrancesco D, Barbuti A.
Reference	69 th National Congress Società Italiana Fisiologia 19-21 st Sept 2018
Title and authors	"Assessing the arrhythmogenic risk associated with pathological mutations in the Caveolin-3 gene using both heterologous systems and patients' iPSC- cardiomyocytes" Benzoni P, Mohammadi N, Meraviglia V, Rossini A, Gazzero E, Baratto S, Milanese R, Bucchi A, Baruscotti M, DiFrancesco D and Barbuti A.
Reference	42nd ESC Working Group on Cardiac Cellular Electrophysiology -Essen (Germany) 15 th -17 th June 2018
Title and authors	"Effects of fgf23 on sinoatrial node activity" A. Bucchi, G. Bertoli, E. Micelli, R. Milanese, C. Bazzini, P. Benzoni , A. Barbuti, M. Baruscotti, D. DiFrancesco
Reference	41st Meeting of ESC Working Group on Cardiac Cellular Electrophysiology - Vienna (Austria) 18-21st June, 2017.
Title and authors	"Caveolin-3 variants linked to limb-girdle muscular dystrophies alter trafficking and function of cardiac ion channels." Benzoni, Meraviglia, Rossini, Gazzero, Milanese, Bucchi, Baruscotti, DiFrancesco and Barbuti.
Reference	FCVB Firenze, Italy 2016.
Title and authors	"Advanced multi layered scaffold that increases the maturity of stem cell-derived human cardiomyocytes" Benzoni, Rys, Daraio, Dell'Era

Reference	FCVB Firenze, Italy 2016
Title and authors	"Mutations of the Caveolin-3 Gene as a Predisposing Factor for Cardiac Arrhythmias" Benzoni, Campostrini, Bonzanni, Milanese, Bucci, Baruscotti, DiFrancesco and Barbuti.
Reference	Selected for oral presentation in CIRP BioM 2015 Manchester (UK).
Title and authors	"Biomanufacturing of a Chitosan/Collagen Scaffold to Drive Adhesion and Alignment of Human Cardiomyocyte Derived from Stem Cells" Benzoni P, Ginestra P, Altomare L, Fiorentino A, De Nardo L, Ceretti E, Dell'Era P.
Reference	Selected for oral presentation in the 38th Meeting of ESC Working Group on Cardiac Cellular Electrophysiology - Maastricht (Netherlands) 20-22nd September, 2014.
Title and authors	"iPSC-derived human cardiomyocytes from atrial fibrillation patients show increased frequency rate and alteration of If current." Benzoni P, Barbuti A, DiFrancesco D, Dell'Era P.
Reference	Stem Cell Research Italy - Annual meeting, Salerno (Italy) 28-30th May, 2014.
Title and authors	"Increased frequency rate and alteration of If current in iPSC-derived human cardiomyocytes from atrial fibrillation patients." Benzoni P, Barbuti A, Piovani G., Savio G, Dell'Era P.
Reference	Annual meeting, Centro Pastorale Paolo VI (Brescia, Italy) 27-29th June, 2013.
Title and authors	"Atrial Fibrillation modeling with iPSC derived Cardiomyocyte." Benzoni P, Barbuti A, Bisleri G, Di Pasquale E, Raya A, Condorelli G, Dell'Era P.
Reference	ICGEB Conference "Frontiers in cardiac and vascular regeneration", Trieste, giugno 2012
Title and authors	"iPS technology as a tool to investigate atrial fibrillation." Benzoni P., Bisleri G., De Luca A., Crescini E., Barbuti A., Baruscotti M., Muneretto C., Richaud Y., Raya A., and Dell'Era P.
Reference	51° Annual Meeting of Italian Cancer Society, "Cancer research in the technological post-industrial era", Sesto San Giovanni/Milan, November 2009
Title and authors	"Isolation and characterization of neutralizing and anti-angiogenic anti-FGFR1 single chain antibody." Ronca R., Benzoni P., Gualandi L., Belleri M., Leali D., Tobia C., Urbinati C., Corsini M., Presta M., Dell'Era P.
Honors and Awards	Degree Award 2008/2009 of Concesio Town Council
	Degree Award 2011 of Academy of Sciences and Arts, Don Bartolomeo Grazioli Foundation, Milan, Italy.
	Travel grant from European Society of Cardiology Working Group on Cardiac Cellular Electrophysiology to join the 38th EWGCCE in Maastricht.
	Travel grant from European Society of Cardiology Working Group on Cardiac Cellular Electrophysiology to join the 43th EWGCCE in Lisbon.
Teaching Activity	A.Y.2012-2013 lecture on induced pluripotent stem cell (2h) Tutoring of students during training laboratory A.Y. 2014-2015 Lectures on Viral tools in cellular biology (4h) Tutoring of a Master student for experimental thesis A.Y 2016-2017 Lectures on Stem cell Technologies (4h) Tutoring 2 Master students for experimental thesis A.Y 2017-2018 Lectures on Stem cell technologies (4h) Lectures on Caveolins and caveolae function in Cardiomyocytes (2h) Workshop for bachelor students on cell cultures, cardiomyocytes isolation and Microscopy analysis (22h) Tutoring 2 master students for experimental Thesis A.Y 2018-2019 Lectures on Stem cell technologies (8h) Lectures on Caveolins and caveolae function in Cardiomyocytes (10h) Tutoring 3 master students for experimental Thesis

Data

03/07/2020

Luogo

Usmate Velate