

CURRICULUM VITAE

EUROPEAN FORMAT

PERSONAL INFORMATION

Name, Surname	Valeria, Chiono
Address	██████████
House number, street name, postcode, city, country	████████████████████
Telephone	0110906920
Fax	0110906999
E-mail	valeria.chiono@polito.it
Website	
Nationality	Italian
Place and Date of birth	██████████, 2nd May 1975

WORK EXPERIENCE

From 09/03/2015 to currently	Associate professor Department of Mechanical and Aerospace Engineering; Politecnico di Torino, Turin (Italy)
From 01/01/2018 to 31/12/2018	Associate member of Italian National Research Council – Institute of Physicochemical Processes (IPCF-CNR) – Pisa (Italy)
From 08/03/2012 to 08/03/2015	RTDA Researcher within the national FIRB2010 project "Bioartificial materials and biomimetic scaffolds for a stem cells-based therapy for myocardial regeneration" Faculty of Biomedical Engineering; Department of Mechanical and Aerospace Engineering; Politecnico di Torino, Turin (Italy)
From 01/07/2010 to 07/03/2012	Post-Doc Research Fellow within the regional ACTIVE project ("Advanced Cardiovascular Therapies"). Department of Department of Mechanical and Aerospace Engineering (ex Dept. of Mechanics), Politecnico di Torino, Turin (Italy)
From 01/07/2007 to 30/06/2010	Post-Doc Research Fellow within the European project PHOTONANOTECH -NMP4-CT-2007-033168 "Photodynamic Nanoparticle Applications for Water Purification, Textile Finishing, Photodynamic Biomineralization and Biomaterials Coating". Research manager for Politecnico di Torino: Prof. Gianluca Ciardelli. Department of Department of Mechanics, Politecnico di Torino, Turin (Italy)
From 01/04/2006 to 31/05/2007	Post-Doc Research Fellow within the European project HIPERMAX - NMP3-CT-2003-505790 "High Performance Industrial Protein matrices through bioprocessing". Research manager for Politecnico di Torino: Prof. Gianluca Ciardelli.

University of Pisa, Department of Chemical Engineering, Industrial Chemistry and Materials Science, Pisa (Italy)

From 01/01/2006 to 28/02/2006

Post-Doc Research Fellow,

within the Italian FIRB project "Development of materials and technologies for controlled drug delivery systems in endovascular devices" on the subject "Preparation of polymer systems for the controlled release of active agents from endovascular prostheses". Research manager: Prof. Paolo Giusti.

University of Pisa, Department of Chemical Engineering, Industrial Chemistry and Materials Science, Pisa, Pisa (Italy)

From 01/10/2002 to 30/11/2002

Research collaborator on the subject: "Physicochemical characterization of polyolefin-based materials for applications as packaging films: analysis of experimental physicochemical data for the evaluation of the influence of the structural characteristics and processing parameters on the materials properties". Research manager: Dr. Mariano Pracella.

Center for Polyphasic and Biocompatible Macromolecular Materials C.N.R., Pisa, Pisa (Italy)

From 01/02/2002 to 31/07/2002

Research collaborator on the subject: "Physicochemical characterization of polyolefin-based materials for applications as packaging films: analysis of experimental physicochemical data for the evaluation of the influence of the structural characteristics and processing parameters on the materials properties". Research manager: Dr. Mariano Pracella.

Center for Polyphasic and Biocompatible Macromolecular Materials C.N.R., Pisa, Pisa (Italy)

From 01/04/2001 to 31/12/2001

Research collaborator

on the subject: "Effect of the compatibilisation process on the morphology and properties of blends between thermoplastic polymers". Research manager: Prof. Pierluigi Magagnini.

University of Pisa, Department of Chemical Engineering, Industrial Chemistry and Materials Science, Pisa (Italy)

EDUCATION AND TRAINING

From 01/01/2003 to 31/12/2005

Ph.D in Chemical and Materials Engineering (13 June 2006)

University of Pisa, Pisa (Italy)

From 01/11/1999 to 14/02/2001

Master Degree in Chemical Engineering - Summa Cum Laude (14 February 2001)

University of Pisa, Pisa (Italy)

RESEARCH ACTIVITIES

Research sectors

Tissue Engineering, Biomaterials Science, Industrial Bioengineering, Engineering for Regenerative Medicine

Coordination of projects:

1) PROJECT ERC-CoG-2017 BIORECAR "Direct cell reprogramming therapy in myocardial regeneration through an engineered multifunctional platform integrating biochemical instructive cues. Budget € 2.000.000. From 1/05/2018 to 31/04/2023.

2) Project - Call for proposals Joint research projects with top universities – Compagnia di San Paolo: "In Vitro Experimental Models for Biomaterials-Mediated Drug Delivery to the Central Nervous System (BIOMODE)". From 1/09/2017 to 31-08-2021, Project Manager: V. Chiono.

3) PROJECT "FUTURE IN RESEARCH 2010 (FIRB 2010)" financed by Italian Ministry of University and Research (MIUR) – 2012-2015: "Bioartificial materials and biomimetic scaffolds for a stem cells-based therapy for myocardial regeneration". Budget €1.062.600. From 8/03/2012 to 8/09/2015.

4) "PROOF OF CONCEPTS (PoC)" PROJECT financed by Compagnia di San Paolo – 2017: "Method for the preparation of cellularised constructs based on thermosensitive hydrogels". Budget € 41.000. From 15/01/2017 to 21/07/2017.

5) CALL FOR JOINT PROJECTS FOR THE INTERNATIONALIZATION OF RESEARCH, financed by Compagnia di San Paolo – 2014-2016: "Smart Injectable Drug-Delivery systems for Parkinson's and Alzheimer's Disease Treatment" (PAD-INJ). Budget € 55000. From 4/12/2014 to 30/6/2016.

6) MITOR PROJECT - Compagnia di San Paolo - 2016-2017 "In Vitro Modelling of Nanoparticle-Mediated Drug Delivery to the Central Nervous System by a Microfluidic Platform Mimicking the Biological Barriers" (NANOCAB). Collaboration with MIT - Cambridge (US). Budget \$ 17.000. From 1/1/2016 to 31/12/2017.

7) PIEMONTE REGION: Project of Finalized Sanitary Research – 2008 bis "Nano-structured biomimetic coatings for regenerative medicine". Budget € 12.000. From 04/12/2008 to 03/12/2010.

8) PIEMONTE REGION: Project of Finalized Sanitary Research - 2009 "Multifunctional nano-coatings for medical devices with improved anti-inflammatory and antibacterial properties". Budget € 15.000. From 01-09-2009 to 30/09/2011.

Scientific responsibility of project work-packages/tasks in the following projects:

1) NMP. 2013.2.2-1 PROJECT "Reinforced Bioresorbable Biomaterials for Therapeutic Drug Eluting Stents" (Rebiostent) – 2014-2016.

2) H2020-MSCA ITN-2014 PROJECT "Drug-Free Antibacterial Hybrid Biopolymers for Medical Applications" (HyMedPoly) - 2015-2018.

3) "BANDO ATENEO-CSP 2014" PROJECT "Biosurfactant-based coatings for the inhibition of microbial adhesion on materials for medical use: experimental models, functionalization strategies and potential applications (BIOSURF)" – 2015-2018.

4) PIEMONTE REGION PROJECT POR-FESR 2007/2013 Asse I Attività I.1.3 Innovazione e P.M.I. – 2014-2015 "Development of a platform of Nitinol stents with a surface able to release drugs for applications in the treatment of peripheral artery disease" (DESTINI).

5) PIEMONTE REGION PROJECT –POR-FESR 2007/2012 Asse I Attività I.1.3 Innovazione e P.M.I. - 2009-2012 "Materials and Nanotechnologies for new generation endovascular devices" (Nanostent).

Since the beginning of my academic carrier in 2002, I have authored **88 publications** among which 28 as first author; 23 as second author; 7 as last author which demonstrates my key role in conducting and leading research, with overall 1993 citations, achieving H-index equal to 24 (Scopus database). I am also co-inventor of 4 patents.

Ten major publications are listed below.

Publications as Senior Author without PhD supervisor:

- 1) V. Chiono, C. Tonda-Turo (2015), "Trends in the design of nerve guidance channels in peripheral nerve tissue engineering", *Progress in Neurobiology*, 131: 87-104.
- 2) M. Boffito, P. Sirianni, A.M. Di Rienzo, V. Chiono (2015) "Thermosensitive block copolymer hydrogels based on poly(L-caprolactone) and polyethylene glycol for biomedical applications: State of the art and future perspectives", *J Biomed Mater Res A*. 103: 1276-1290.
- 3) I. Carmagnola, T. Nardo, P. Gentile, C. Tonda-Turo, C. Mattu, S. Cabodi, P. Defilippi, V. Chiono (2014) "Poly(lactic acid)-based blends with tailored physicochemical properties for tissue engineering applications: a case study". *Intern. J. Polym. Mater. Polym. Biomat.* 2015, 64: 90-98.
- 4) P. Gentile, V. Chiono, I. Carmagnola (2014) "An Overview of Poly(Lactic-co-Glycolic) Acid (PLGA) as Biomaterials for Bone Tissue Engineering". *Int. J. Mol. Sci.* 15: 3640-3659. (open access)

Other relevant publications with PhD supervisor:

- 5) M. Ferreira, P. Gentile, V. Chiono, G. Ciardelli (2012). "Collagen for bone tissue regeneration". *Acta Biomaterialia* 2012; 8: 3191-3200.
- 6) S. Sartori, V. Chiono, C. Tonda-Turo, C. Mattu and G. Gianluca (2014). "Biomimetic polyurethanes in nano and regenerative medicine". *J. Mater. Chem. B* 2014; 2: 5128-5144.
- 7) V Chiono, P Gentile, F Boccafroschi, M Ninov, I Carmagnola, V Georgieva, G Georgiev, and G Ciardelli (2010). "Photoactive Chitosan Switching on Bone-Like Apatite Deposition", *Biomacromolecules* 11: 309-315.
- 8) G. Ciardelli, V. Chiono (2006). "Materials for peripheral nerve regeneration", *Macromolecular Bioscience* 6: 13-26.
- 9) G. Ciardelli, V. Chiono, G. Vozzi, M. Pracella, A. Ahluwalia, C. Cristallini, N. Barbani, P. Giusti (2005). "Blends of poly-(ε-caprolactone) and polysaccharides in tissue engineering applications", *Biomacromolecules* 6: 1961-1976.
- 10) V. Chiono, G. Vozzi, M. D'Acunio, S. Brinzi, C. Domenici, F. Vozzi, A. Ahluwalia A, N. Barbani, P. Giusti, G. Ciardelli (2009). "Characterisation of blends between poly(epsilon-caprolactone) and polysaccharides for tissue engineering applications", *Materials Science & Engineering C-Materials For Biological Applications* 29: 2174-2187.

National and International granted patents

- 1) V. Chiono, P. Mozetic, S.M. Giannitelli, A. Rainer, M. Trombetta, M. Boffito, E. Gioffredi, S. Sartori, "Methods for the preparation of cellularised constructs based on thermosensitive hydrogels", TO102015000020718, Politecnico di Torino and Università Campus Bio-Medico – Rome;
- 2) G Ciardelli, P Gentile, C Tonda Turo, V Chiono, C. Mattu, A.M. Ferreira-Duarte "Biomimetic and biodegradable polymeric bone cements for vertebroplasty". TO2011A000549-PCTIT2012000182.
- 3) G. Ciardelli, C. Tonda Turo, P. Gentile, V. Chiono "Implantable Prosthetic Device and Solvent Casting Method for Manufacturing The Same". TO2010A000726; PCT/IB2011/053787; WO2012029020 (A1).
- 4) G. Ciardelli, V. Chiono, F. Bertoni, G. Vozzi, P. Giusti, N. Barbani "Processo di ottenimento di condotti cavi per impieghi nella rigenerazione del sistema nervoso". PI2007A000066

ADDITIONAL INFORMATION

Participation at International Conferences as invited speaker or organizer

Since 2012, I have chaired sessions at 2 Termis-EU meetings and at 1 Termis-World Congress; I have organized and chaired 3 workshops, and been invited to present at 6 prestigious international conferences, of which the following are a representative selection:

- 1) "Functionalised polyurethane scaffolds mimicking cardiac primitive cell niche microenvironment". TERMIS-EU Meeting, 28 Jun.-1 Jul. 2016, Uppsala – Sweden (keynote speaker).
- 2) "Hydrogels as carries for drug delivery". International Conference on Polymeric Biomaterials, Bioengineering & Biodiagnostics, 24-30 Oct. 2014, New Dehli – India.

3) "Polyurethane-based scaffolds mimicking cardiac progenitor cells niche microenvironment". Polymers for Advanced Technologies 2013 (PAT 2013) – Young Talents Session – 29 Sep.-2 Oct. 2013, Berlin, Germany
Additionally I have been invited to hold seminars at University of Westminster, University of Newcastle, University of Cambridge.

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CONSENSO**

Il D.Lgs 30/06/2003, n. 196 "Codice in materia di protezione dei dati personali" regola il trattamento dei dati personali, con particolare riferimento alla riservatezza, all'identità personale e al diritto di protezione dei dati personali; l'interessato deve essere previamente informato del trattamento.

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13-03-2018

