Silvia FARÈ
Professional and Scientific CV, April 2024

PERSONAL INFORMATION

First name/Surname: Silvia Farè

Email: silvia.fare@polimi.it
Nationality: Italian

EDUCATION AND TRAINING

May 19th, 1998	**PhD degree** in Biomaterials (X^ cycle). Politecnico di Milano, Milan (Italy). Department of Applied Chemistry and Physic and Department of Bioengineering. Dissertation: In vitro *oxidative degradation of medical-grade polyurethanes*. Supervisors: Prof. A. Cigada, Prof. M.C. Tanzi.
January 1997 - April 1997	**Visiting PhD Student**. Quebec Biomaterials Institute and Université Laval, Québec, Canada. Laboratory for Biomaterials & Bioengineering, supervisors Dr. R. Guidoin and Prof. G. Laroche.
March 1996 - September 1996	**Visiting PhD Student**. Quebec Biomaterials Institute and Université Laval, Québec, Canada. Laboratory for Biomaterials & Bioengineering, supervisors Dr. R. Guidoin and Prof. G. Laroche.
November 1993 - March 1996	**Visiting PhD Student**. Joint Research Centre, Institute for Advanced Materials, Ispra (VA, Italy). Supervisor Dr. F. Brossa.
July 25th, 1994	**Master Degree** in Management Engineering. Politecnico di Milano, Milan (Italy). Department of Applied Chemistry. Thesis: *Wear tests on titanium alloy for articular prosthesis*. Supervisor: Prof. A. Cigada.
February 1993 - October 1996	**Visiting Master Student**. Joint Research Centre, Institute for Advanced Materials, Ispra (VA, Italy). Supervisor Dr. F. Brossa.

PRESENT POSITION

April 2021 – today	**Full Professor** in Industrial Bioengineering (SSD ING-IND/34, SC 09/G2). Politecnico di Milano, Milan (Italy). Department of Chemistry, Materials and Chemical Engineering "G. Natta".

PROFESSIONAL EXPERIENCE

December 2014 – March 2021	**Associate Professor** in Industrial Bioengineering (SSD ING-IND/34, SC 09/G2). Politecnico di Milano, Milan (Italy). Department of Chemistry, Materials and Chemical Engineering "G. Natta".
January 2013 – November 2014	**Assistant Professor** in Industrial Bioengineering (SSD ING-IND/34), Politecnico di Milano, Milan (Italy). Department of Chemistry, Materials and Chemical Engineering "G. Natta".
January 2005 – December 2012	**Assistant Professor** in Industrial Bioengineering (SSD ING-IND/34), Politecnico di Milano, Milan (Italy). Department of Bioengineering.
June 2003 –December 2004	**Technician**, EP level, EP1 economic position, technical-scientific and data elaboration area, Politecnico di Milano, Milan (Italy). Department of Bioengineering.

March 1999 – March 2003	**Research Fellow**. Research program: *Chemico-physical and mechanical characterization of polymeric biomaterials*. Politecnico di Milano, Milan (Italy). Department of Bioengineering.
February 1998 – February 1999	**Post-doc Research Fellow** (sponsored by Tecnobiomedica S.p.A, Pomezia, Rome, Italy). Politecnico di Milano, Milan (Italy). Department of Bioengineering.

AWARDS

2022	**Rosalind Franklin Award in Science**, RFS / MAL Award in Science, a prestigious annual award for the best paper by a woman in science or under-represented minority in each of the publisher's 100 peer-reviewed journals
2011	**Highlights of 2011** collection of Smart Materials and Structures for the paper *Shape memory polymer cellular solid design for medical applications*, L De Nardo, S Bertoldi, MC Tanzi, HJ Haugen, S Farè, 2011 Smart Mater Struct 20 035004.
May 2000	**Travel Award**, VI World Biomaterials Congress, Kamuela, Hawaii, USA.

ADDITIONAL ACTIVITY

Session chairperson at International Congress

Silvia Farè has been chairperson at many International Congresses starting from May 2000 at the VI World Biomaterials Congress, Kamuela, Hawaii, USA, May 15-20, 2000. Last session chairperson (in life congress) was at the 33rd Annual Conference of the European Society for Biomaterials, Davos, CH, September 4-8, 2023.

Member of National and International Congress Committee

2025	Chair (together with Gianluca Ciardelli), 34th Annual Conference of the European Society for Biomaterials, Turin, IT, September 7-11, 2025
2024	Director (together with Giulia Scalet, Konstantin Volokh, Fabiana Zama), International Summer School, Lake Como School of Advanced Studies (Fondazione Alessandro Volta), *Mechanics of active soft materials: experiments, theory, numerics, and applications*, Como, Italy, July 1-5, 2024
	Member of the Scientific Committee, XIV INSTM Congress, Cagliari, I, June 9-12, 2024
2023	Member of the International Scientific Committee, 33rd Annual Conference of the European Society for Biomaterials, Davos, CH, September 4-8, 2023.
2022	Member of the International Scientific Committee, 32nd Annual Conference of the European Society for Biomaterials, Bordeaux, F, September 4-8, 2022.
	Member of the International Scientific Advisory Board, TERMIS EU-Chapter Conference, Krakow, PL, 28th June-1st July, 2022.
2021	Member of the Organizing Committee, Gruppo Nazionale di Bioingegneria, XL Bioengineering National School, *Biofabrication: an integrated bioengineering approach for the automated fabrication of biological structures for clinical and research applications*, Bressanone, BZ, Italy, September 13-16, 2021.

	Member of the International Scientific Committee, 31st Annual Conference of the European Society for Biomaterials, Porto, PT, September 5-9, 2021.
2021	Member of the International Scientific Committee, 31st Congress of the European Society of Biomechanics, Milan, IT, July 11-14, 2021.
2020	Member of the International Committee, 11th World Biomaterials Congress (Virtual Congress), December 11-15, 2020.
2019	Member of the International Scientific Committee, 30th Annual Conference of the European Society for Biomaterials, Dresden, DE, September 9-13, 2019.
	Faculty Member of the IDBN Congress, IDBN2019, 3D Printing and Bioprinting in Medicine and Surgery, Pisa (IT), October 28 -30, 2019.
2018	Member of the Review Committee – Track 2: Biomaterials and Tissue Engineering, Gruppo Nazionale Bioingegneria, VI Congress, Milan, Italy, June 25-27, 2014.
	Member of the International Scientific Committee, 29th Annual Conference of the European Society for Biomaterials, Maastricht, NL, September 8-13, 2019.
2014	Member of the Scientific Committee, Gruppo Nazionale Bioingegneria, IV Congress, Pavia, Italy, June 25-27, 2014.
2013	Member of the International Scientific Committee, International Conference on Processing & Manufacturing of Advanced Materials - Processing, Fabrication, Properties, Applications, Las Vegas, USA, December 2-6, 2013.
2013	Member of the Organizing Committee, Gruppo Nazionale di Bioingegneria, XXXII Bioengineering National School, *Integrated Approach for Regenerative Medicine*, Bressanone, BZ, Italy, September 16-20, 2013.
2006 – today	Member of the Scientific Committee, National Biomaterials Congress, Italian Society for Biomaterials (Società Italiana Biomateriali, SIB).
2002	Member of the International committee. Symposium on Advanced Materials for Biomedical Applications, Metallurgical Society of the Canadian Institute of Mining, Metallurgy and Petroleum, Montréal, Québec, Canada, August 11-14, 2002.

Reviewer for International Journals

Silvia Farè is reviewer for several international journals in the area of Biomaterials, Regenerative Medicine, Biomedical Applications. The main important ones are here listed with the most recent Impact Factor score.

2003 - today	*Acta Biomaterialia* (Elsevier Sci. Ltd), ISSN 1742-7061, IF: 7.242.
	Advanced Functional Materials (Wiley Ltd), ISSN 1616-301X, IF: 16.836.
	Artificial Organs (Wiley-Blackwell Ltd), ISSN 0160-564X, IF: 2.259.
	Biofabrication (IOP Science), Open Access Journal, ISSN: 1758-5090, IF: 8.213.
	Biomaterials (Elsevier Sci. Ltd), ISSN 0142-9612, IF: 10.317.
	Biomaterials Science (Royal Society of Chemistry), ISSN: 2047-4830, IF: 6.183
	Biomatter (Landes Bioscience), ISSN 2159-2527, IF: 4.750.

Journal of Applied Biomaterials and Functional Materials (Sage) FORMER *Journal of Applied Biomaterials & Biomechanics* (Wichtig Editore), ISSN 2280-8000, IF: 2.000.

Journal of Biomaterials Applications (Sage Publications Ltd), ISSN 0885-3282, IF: 2.220.

Journal of Biomaterials Science: Polymer Edition (Brill Academic Publishers), ISSN 0920-5063, IF: 2.690.

Journal of Materials Science: Materials in Medicine (Springer), ISSN 0957-4530, IF: 2.489.

Langmuir (American Chemical Society), ISSN 0743-7463, IF: 3.557.

Materials Letters (Elsevier Sci. BV), ISSN: 0167-577X, IF: 3.019.

Materials Science and Engineering C (Elsevier Sci. BV), ISSN 0928-4931, IF: 5.88.

Polymers (MDPI AG), Open Access Journal, ISSN 2073-4360, IF: 3.426.

Editorial Board

February 2021 – today	**Specialty Chief Editor** for the Bioinspired and Complex Materials section of the journal Frontiers in Biomaterials Science (Field Chief Editor: Dietmar Werner Hutmacher)
March 2019 - today	**Review Editor** for Nanobiotechnology in Frontiers in Bioengineering and Biotechnology.
January 2018 - today	**Editor in Chief** - Journal of Applied Biomaterials and Functional Materials (JAB-FM), Sage.
January 2012 – December 2017	**Associate Editor** - Journal of Applied Biomaterials and Functional Materials (JAB-FM), Sage. Former Journal of Applied Biomaterials & Biomechanics (Wichtig Editore).

Referee of National and International Grants

2021 – today	**Reviewer**. EU projects (e.g., Pathfinder projects, ERC projects).
2021, 2022	**Reviewer**. Fundação para a Ciência e a Tecnologia, I.P. (FCT), Portuguese public funding agency for R&D. Biotechnology panel.
2020, 2022, 2023	**Reviewer**. The Slovak Research and Development Agency, SK. **Co-Chair of the Bioengineering and Biotechnology panel**. Fundação para a Ciência e a Tecnologia, I.P. (FCT), Portuguese public funding agency for R&D.
2019	**Remote reviewer**. Consolidator Grant 2019 call, ERC. **Reviewer**. The Association of Dutch Health Foundations, NL.
2018	**Reviewer**. Department of Innovation and Development of the Ministry of Science and Higher Education, PL.
2012	**Reviewer**. National Council of Research (Consiglio Nazionale delle Ricerche, CNR), Project Bandiera "La Fabbrica del Futuro", Italy.
2010 - today	**Reviewer**. Minister for Education, University and Research (Ministero dell'Istruzione, dell'Università e della Ricerca, MIUR): referee for projects Futuro in Ricerca, FIRB 2010 e FIRB 2012, Italy.
2009 – 2013	**Reviewer**. Fundação para a Ciência e a Tecnologia, I.P. (FCT), Portuguese public funding agency for R&D.

Duties in Scientific Society

2021 - today	**Treasurer of the Council** of the European Society for Biomaterials (ESB).
2018 - today	**President of the Council** of the Italian Society for Biomaterials (SIB).
2017 - 2021	**Member of the Council** of the European Society for Biomaterials (ESB), Liaison Officer National Affiliated Societies.
2006 – 2019	**Delegate** of GNB at Politecnico di Milano.
2005 - 2017	**Member** of the Council of the Italian Society for Biomaterials (SIB), in charge as treasurer.

Academic Commitments

2019 – today	**Vice-coordinator** of the Course in Biomedical Engineering (Bachelor and Master Level), Politecnico di Milano, Milan (Italy).
2018 – 2022	**Member** of the Scientific Commission, Department of Chemistry, Materials and Chemical Engineering "G. Natta", Politecnico di Milan, Milan (Italy).
2011 – 2012; 2014 – today	**Member** of the PhD program Committee in Bioengineering, PhD School, Politecnico di Milano, Milan (Italy).
2006 – today	**Member** of the committee of the Council of Biomedical Engineering Course for Educational Orientation, Politecnico di Milano, Milan, Italy.
2004 - 2007	**Member** of the Executive Body (Giunta), Department of Bioengineering, Politecnico di Milano, Milan (Italy).

Member of advisory board (international)

2012	PhD Thesis - Davide Barbieri "Instructive composites for bone regeneration", University of Twente (Twente, The Netherlands) and Xpand Biotechnology BV (Bilthoven, The Netherlands). Members of the Board: Prof. G. van dei Steenhoven (Chairman), Prof. J.D. de Bruijn (Promoter), Dr. H. Yuan (Assistant Promoter), Prof. W.J.A. Dhert (Member), Prof. **S. Farè** (Member), Prof. D.W. Grijpma (Member), Prof. J.A. Jansen (Member), Dr. M.A.B. Kruft (Member), Prof. C.A. van Blitterswijk (Member).
2004	Master Thesis - Susan Tam "Physocochemical analyses of alginates and APA microcapsules for the improvement of microcapsule biocompatibility", Mémoire de Maitrise és Sciences Appliqués (Génie Biomédical), Institut de Génie Biomédical, Ecole Polytechnique de Montréal. Members of the Board: Prof. Louis Cartilier (President), Prof. L'Hocine Yahia (Promoter and Member), Prof. Jean-Pierre Hallé (Promoter and Member), Dr. **Silvia Farè** (Member)

Other activities

- **Curatorship** of the 3rd, 4th and 5th Italian edition of "Foundations of Materials Science and Engineering, W.F. Smith, McGraw-Hill Ed.
- **Organizer** and **lecturer** of the course "Nature as muse, innovation to use. Bioinnovation for biomedics", promoted by Board of European Students of Technologies, October 2-10, 2010, Politecnico di Milano, Milan, Italy.

INVITED SEMINARS AND LECTURES

October 2024	**4th BioMaH Conference**, Biomaterials and Novel Technologies for Healthcare, October 15-18, 2024. Keynote speaker, *Biomimetic coatings for bone defect repair and 3D in vitro models.*
June 2024	**Summer School in Bordeaux**, University Hospital of Bordeaux, IHU LIRYC – Electrophysiology and heart modeling institute, Pessac – France.
February 2024	**Scientific workshop: Bioengineering for Biofabrication**, Pavia, Italy, February 16th, 2024. Jeynote speaker, *Innovative blends for Chronic Lymphatic Leukemia in vitro models*.
December 2023	**Master 2 Cardiac EP "Electromechanical Heart Diseases" program**, University Hospital of Bordeaux, IHU LIRYC "Bioabsorbable stents and bioengineered valves", Pessac – France.
June 2023	**Summer School in Bordeaux**, University Hospital of Bordeaux, IHU LIRYC – Electrophysiology and heart modeling institute, Pessac – France.
April 2023	**13rd European Symposium on Vascular Biomaterials (ESVB)**, Strasbourg, France, April 19-22, 2023. Invited speaker, *Silk fibroin graft*.
October 2022	**3rd BioMaH Conference**, Biomaterials and Novel Technologies for Healthcare, October 18-21, 2022. Keynote speaker, *Biomimetic 3D scaffold-based in vitro models for bone pathology investigation.*
September 2022	**Bioceramics 32**, Venice, Italy, September 20-23, 2022. Keynote speaker, *Biomimetic coatings on polymeric scaffolds for bone defect repair and 3D in vitro models.*
June 2022	**Summer School in Bordeaux**, University Hospital of Bordeaux, IHU LIRYC – Electrophysiology and heart modeling institute, Pessac – France.
May 2021	**Thermec Congress 2021**, Virtual Conference, 9-14 May, 2021. Invited speaker, *Versatile crosslinked gelatin hydrogel for regenerative medicine applications.*
May 5th, 2020	**RIT Lecture**, Istituti Ortopedici Rizzoli, Bologna, Italy. Invited lecture, *Smart natural hydrogels for regenerative medicine applications.*
February 2020	**3D Medical Conference & Expo**, Maastricht, NL, 4-5 February, 2020. Invited speaker, *3D printing of thermo-responsive hydrogels*.
December 2019	**TERMIS-AM Congress 2019**, Orlando, FL, USA, 2-5 December, 2019. Invited speaker, *Polyurethane-based 3D structures as model for bone cells behavior*.
May 2019	**TERMIS-EU Congress 2019**, Rhodes, Greece, 27-31 May, 2019. Invited speaker, *Versatile crosslinked gelatin hydrogel for regenerative medicine applications*.
July 2018	**4th International Conference on Biomedical Polymers & Polymeric Biomaterials**, Kraków, Poland, 15-18 July, 2018. Invited speaker, *Assessment of SIBS copolymer properties and suitability for biomedical applications*.
April 2013	**Symposium on materials for biomedical applications/bioceramics**, Villa Vigoni, Loveno di Menaggio, CO, Italy, 8-10 April, 2013. Invited lecture, *Nano and microstructured biomimetic composites for bone tissue regeneration*.
August 2011	**Thermec Congress 2011**, Québec, QC, Canada, 1-5 August, 2011. Invited speaker, *Aligned electrospun nanofibers to biomimic extracellular matrix*.

July 2011	**17ª AIMAT-SIB School, *Advances in Materials & Biomaterials***, Ischia Porto (NA), Italy: Invited seminar, *Scaffold for soft tissue regeneration*.
June 2011	**MeDDiCA TA3 Summer School, *Medical Device Design***, Milan, Italy, 6-10 June, 2011. Invited seminars, *Introduction on material properties (polymers)*.
January 2011	**Twente University**, Enschede, The Netherlands, 25th January, 2011. Invited speaker, Prof. Lorenzo Moroni Group, *Skeletal muscle tissue engineering*.
April 2008	**Progentix Orhobiology BV**, Bilthoven, The Netherlands, 8th April, 2008. Invited seminar by Prof. Joost de Bruijn, *The research activities at BioMatLab, Politecnico di Milano*.
October 2007	**Universitè Laval**, Québec, Québec, Canada, 5th October, 2007. Invited seminar by Prof. Diego Mantovani, *Advanced biomaterials for tissue engineering applications and devices*.
May 2007	**IRCCS Istituto Nazionale dei Tumori**, Milan, Italy, 15th May, 2007. Invited speaker, *Explanted breast implants. Influence of radiotherapy*.
October 2006	**Ecole Polytechnique de Montréal**, Montréal, Québec, Canada, 5th October, 2006. Invited seminar by Prof. L'Hocine Yahia, *Polymers and copolymers as biomaterials*.
July 2006	**Thermec Congress 2006**, Vancouver, BC, Canada, 5-9 July, 2006. Invited speaker, *Different processing methods to obtain porous structure in shape memory polymers.*
September 2005	**XXIV Bioengineering National School, *Biomaterials: from prosthesis to regenerative medicine***, Gruppo Nazionale di Bioingegneria, Bressanone, BZ, Italy, 26-29 September, 2005. Invited lesson, *Polymeric biomaterials development: from "inert" material to smart materials*.
June 2005	**Congresso Nazionale Associazione Nazionale Specialisti in Medicina dello Sport**, 19-22 G. Chieti Scalo, Italy, 19 – 22 June, 2005. Invited speaker, *Bioactive scaffold for the post-traumatic muscle regeneration.*

AFFILIATIONS

- **Member** of European Society of Biomaterials, ESB.
- **Member** of Canadian Biomaterials Society, CBS.
- **Member** of International Society for Biofabrication (ISBF).
- **Member** of Tissue Engineering and Regenerative Medicine International Society (TERMIS).
- **Member** of the Italian Society of Organ-on-Chip (SIOoC).
- **Member** of the National Group of Bioengineering (Gruppo Nazionale di Bioingegneria, GNB).
- **Member** of Italian Society for Biomaterials (Società Italiana Biomateriali, SIB).
- **Member** of Interuniversity Consortium for Materials Science and Engineering (Consorzio Interuniversitario Nazionale per la Scienza e la Tecnologia dei Materiali, INSTM).

TEACHING ACTIVITY

Courses at Bachelor and Master Level

a.y. 2009-10 - current a.y.	**Professor** of **Chemical Bioengineering [1]** (054285, CFU 5, 1st semester),

	integrated course Chemical Bioengineering. Bachelor in Biomedical Engineering, Politecnico di Milano.
a.y. 2016-17 - current a.y.	**Professor** of **Bioartificial and Biomimetic Structures** (098454, CFU 5, 1st semester). Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2021-22 - current a.y.	**Professor** of **Biomaterials** (083046, CFU 5, 2nd semester), integrated course Biocompatibility and Biomaterials. Medtec program, Politecnico di Milano – Hunimed.
a.y. 2013-14 - a.y. 2022-23	**Professor** of **Biomaterials [2]** (083046, CFU 5, 2nd semester), integrated course Biomaterials. Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2009-10 - a.y. 2012-13	**Professor** of **Project – Chemical Bioengineering** (085865, CFU 5, 2nd semester). Bachelor in Biomedical Engineering, Politecnico di Milano.
a.y. 2005-06 - a.y. 2012-13	**Professor** of **Laboratory of Micro and Nano Structures** (078071, CFU 2.5, 2nd semester), integrated course Laboratory of Micro and Nano Structures + Laboratory of Biocompatibility and Cell Culture). Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2005-06 - a.y. 2008-09	**Professor** of **Laboratory of Micro and Nano Structures** (078071, CFU 2.5, 1st semester), integrated course Laboratory of Micro and Nano Structures + Laboratory of Biocompatibility and Cell Culture). Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2004-05	**Professor** of **Integrated Course Laboratory of Micro and Nano Structures + Laboratory of Biocompatibility and Cell Culture** (073578, 5CFU, 2nd semester). Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2003-04	**Contract professor** of **Integrated Course Laboratory of Micro and Nano Structures + Laboratory of Biocompatibility and Cell Culture** (073578, 5CFU, 2nd semester). Master in Biomedical Engineering, Politecnico di Milano.

Courses at PhD in Bioengineering

a.y. 2004-05	**Professor** of **Biomaterials and Tissue Engineering**, coordinator Prof. M.C. Tanzi, Politecnico di Milano.
a.y. 2002-03	**Professor** of **Instrumental Analysis and Material Control**, coordinator Prof. A. Cigada and Prof. R. Chiesa, Politecnico di Milano.

Courses in Other Universities

a.y. 2005-06 – a.y. 2011-12	**Contract professor** of **Biomaterials**, 3 CFU (integrated course Biomaterials and Surgery Implants), Bachelor in Biotechnology, Università degli Studi dell'Insubria, Varese.
a.y. 2001-02	**Contract professor** of **Biomaterials in Plastic Surgery**, Specializing School in Plastic and Reconstructuve Surgery (Director Prof. D. Foschi), Medicine Faculty, Università degli Studi di Milano.

Courses at II Level Master

a.y. 2007-08	**Professor** of **Advanced biomaterials in surgery**, University Master *Innovation in surgery*, Politecnico di Milano.
a.y. 2006-07	**Professor** of **Biomaterials in surgery**, University Master *Engineering in surgery*, Politecnico di Milano.

Practical Activity and Seminars

a.y. 2000-01 - a.y. 2008-09	**Teacher Assistant** - Practical **Foundation in Chemical Bioengineering**, Prof. M.C.Tanzi , Bachelor in Biomedical Engineering, Politecnico di Milano.
a.y. 2001-02 - a.y. 2002-03	**Teacher Assistant** - Practical **Biomaterials III**, Prof. M.C.Tanzi, Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2001-02 - a.y. 2002-03	**Teacher Assistant** – Laboratory course **Instrumental Analysis and Material Control**. Ing. F. Brunella, Master in Biomedical Engineering, Politecnico di Milano.
a.y. 1998-99 - a.y. 2000-01	**Teacher Assistant** - Practical **Biomaterials II**, Prof. A.Cigada, Master in Biomedical Engineering, Politecnico di Milano.
a.y. 1997-98 - a.y. 2002-03	**Teacher Assistant** - Practical **Biomaterials I**, Prof. M.C.Tanzi, Master in Biomedical Engineering, Politecnico di Milano.
a.y. 2003-04 - a.y. 2004-05	**Seminars** - **Biomaterials**, 3 CFU (integrated course Biomaterials and Surgery Implants), Bachelor in Biotechnology, Università degli Studi dell'Insubria, Varese.
a.y. 2002-03	**Seminars** - **Biomaterials in Plastic Surgery**, Specializing School in Plastic and Reconstructuve Surgery (Director Prof. D. Foschi), Medicine Faculty, Università degli Studi di Milano.

Thesis and PhD dissertation supervisor

1996 - today	**Supervisor** or **co-supervisor** of Master Thesis in Chemical Engineering, Materials Engineering, Mechanical Engineering, Biomedical Engineering. Politecnico di Milano, Milan (Italy).
1996 - today	**Supervisor** or **co-supervisor** of Bachelor Thesis (Progetto) in Biomedical Engineering. Politecnico di Milano, Milan (Italy).
2003 - today	**Supervisor** of PhD students enrolled in the Bioengineering PhD program and Materials Engineering PhD program. Politecnico di Milano, Milan (Italy).
2005 - 2012	**Supervisor** or **co-supervisor** of Bachelor Thesis in Biotechnology. Università degli Studi dell'Insubria, Varese (Italy).

SCIENTIFIC ACTIVITY

Silvia Farè started her research activity in 1993 at the Institute of Advanced Materials (JRC, Ispra, VA, Italy) -as Master student (1993-1994) and PhD student (1994-1995). She pursued her PhD studies at Politecnico di Milano after two stages at Université Laval, Quebec (QC, Canada).
After graduation, she started her research at the Department of Bioengineering, Politecnico di Milano, moving to the Department of Chemistry, Materials and Chemical Engineering "G. Natta" (January 2013). During these years, research activities of Silvia Farè have been mainly devoted to the biomedical field and can be summarized in the following main areas:

i. modifying the material structure and/or surface with the appropriate approach to tune final material properties;
ii. understanding fundamental properties of stimulus-responsive polymeric materials, as possible platforms to design innovative biomedical solutions;
iii. designing and synthesizing novel polymeric materials and approaches for regenerative medicine applications;
iv. developing 3D scaffold-based in vitro models for the investigation of solid and liquid cancer pathologies.

In addition, she is involved in additional research fields, such as:

1. ex vivo study of failed prostheses (e.g., heart mechanical valves, breast implants);
2. design, synthesis, and functionalization of advanced polymeric materials;
3. development of protocols for the characterization of biomaterials and biomedical devices,

4. design, development, and fabrication of prosthetic devices. This research line was not finalized to scientific papers as the devices could be suitable for patent;
5. edible coatings made of innovative blends.

Dissemination

Silvia Farè is co-author of several publications in bioengineering, biomaterials, regenerative medicine, implantable devices, design of in vitro models, and cells-material interaction, the main being indexed in publication databases ISI, SCOPUS. A significant trend of increasing of number of publications and citations has been registered starting in 2017. These publications concern mainly the areas of biomaterials design, synthesis and processing, and regenerative medicine as indicated by the analysis of research publications of Silvia Farè using SCOPUS (ORCID: 0000-0002-0303-1131).

On April 16, 2024, her indexes on Scopus were as follows: citations = 4,001; documents =148; h-index = 40.

She is also co-inventor of 6 applications for national or international patents related to the design of new materials intended for medical and industrial applications. She presented her scientific results, related to smart and functional materials in biomedical applications in several oral and poster communications (more than 150) at national and international meetings.

FUNDING

Silvia Farè actively participated to different National and International calls in biomaterials and bioengineering fields. In the following, only competitive grants in which she had a responsibility are reported. Non-competitive (private funding) are also reported. Minor industrial funds have not been detailed in the following: Industrial contracts for the characterization of polymeric materials (Plan1Health s.r.l., Samo s.r.l.) and biological materials (Bosa s.r.l.). Industrial contracts for the design and fabrication of devices for cardiovascular applications. Research contracts for the development and characterization of innovative materials (Tecnobiomedica, Plan1Health s.r.l.).

Competitive grants

2019-2020	**Principal Investigator**. MISTI Global Seed Funds, project *Adipose tissue on a chip*.
2016-2018	**Principal Investigator**. Bando Congiunto RL – INSTM, *COMMAND - Composti per manifattura additiva (IN-RL11)*.
2013-2016	**Principal Investigator**, Cariplo Foundation Project 2012, *Functionally graded hybrid scaffolds for osteo-chondral defect repair –(SHOCH-repair)*.
2010-2012	**Collaborator and responsible for activities**. Research Project *Polymères intelligents pour dispositifs biomédicaux*, Scientific Cooperation Italy – Quebec (funded by Foreign Affairs Minister), Ecole Polytechnique de Montréal, Montréal, Québec, Canada, Prof. L'Hocine Yahia.
	Collaborator and responsible for activities. Research Project *Optimisation expérimentale et numérique de biomatériaux métalliques dégradables pour le remplacement et la régénération du tissu vasculaire*, Scientific Cooperation Italy – Quebec (funded by Foreign Affairs Minister), Laval University, Lab. Biomatériaux et Bioingénierie, Faculté des Sciences et Génie, Québec, Canada, Prof. Diego Mantovani.
2011-2013	**Collaborator and responsible for WPs** (>50%, with main responsibility for the RU PoliMI). Cariplo Foundation Project 2010, *Nanostructured biomimetic trachea substitute (WindPipe).*

2011-2013	**Principal Investigator**. FARB project (University Funds for Research, Politecnico di Milano) *Development of thermo-responsive hydrogel for cell sheet engineering.*
2009-2010	**PoliMI Unit Responsible**, together with prof. A. Redaelli, UO PoliMi. Cariplo Foundation Project 2008 *Nano and micro structured polymeric matrices for engineered cardiac proto-tissue*
2008-2011	**Collaborator** and **responsible of WPs** (>50%, with main responsibility for the RU PoliMI). Cariplo Foundation Project 2007 *Vascular prosthesis in electrospun silk fibroin for the* in vivo *regeneration of small caliber blood vessels.*
2008-2011	**Collaborator** and **responsible of WP** (>50%). IIT 2008 (NanoBiotechnology) - Research line: *Biosensor and Artificial Bio-system.*
2008-2011	**Collaborator** and **responsible of WPs** (>50%)., Regione Lombardia Project *Bioengineerization of tendons and ligaments by using silk fibroin textile structures and adult stem cells.*
2007-2009	**Collaborator responsible of WPs** (>50%). Cariplo Foundation Project 2006 *Mini and micro innovative polymeric systems for cooling electronic devices*
2007-2009	**Collaborator** (<50%). Cariplo Foundation Project 2006 *Microstructures materials for the culture of hematopoietic stem cells for cell therapy of tumors and immunosuppression.*
2007-2009	**Collaborator** and **responsible of WPs** (>50%). PRIN project (Research Project of National Interest, founded by Minister of Education, University and Research) *Bioinspired HELP (Human Elastin-like Polypeptides)-based nanostructured matrices for regenerative medicine.*
2006-2008	**Research Unit Responsible**. PRIN project (Research Project of National Interest, founded by Minister of Education, University and Research) *Influence of the material and its micro and nano-structure on adult mesenchymal stem cells differentiation and inflammatory response.*
2004-2006	**Collaborator** and **responsible of WPs** (>50%). PRIN project (Research Project of National Interest, founded by Minister of Education, University and Research) *Design and preparation of biodegradable scaffolds for skeletal muscle regeneration and biocompatibility - biofunctionality evaluation.*
2003-2006	**Collaborator and responsible for activities**. Research Project *Smart materials and smart surfaces for implantology and scaffolds for tissue engineering*, Scientific Cooperation Italy – Quebec (funded by Foreign Affairs Minister), Ecole Polytechnique de Montréal, Montréal, Québec, Canada, Prof. L'Hocine Yahia.
1998	**Principal Investigator** for Young Researcher Project. Politecnico di Milano, Italy *Shape memory polymers: characterization, selection and possible applications.*
1998-2002	**Collaborator** (>50%). National Research Center (CNR) *Biomimetic composites polyurethane/calcium phosphate as bone substitutes.*

RESEARCH ACTIVITY IN INTERNATIONAL RESEARCH INSTITUTES

January 1997 - April 1997	**Quebec Biomaterials Institute and Université Laval, Québec, Canada.** PhD stage, supervisors Dr. R. Guidoin and Prof. G. Laroche.

As a visiting PhD student, Silvia Farè was in charge of studies on medical-grade polyurethanes for biomedical applications. The research on such materials has been devoted to evaluate the oxidative degradation of tubular samples appropriately produced via solvent casting. The main activities were the design and fabrication of the experimental apparatus aimed to mimic the vascular system. Main morphological, chemico-physical, and mechanical properties were investigated. She also contributed to the assessment of the main issues of the dynamic investigation in biomaterials science: e.g., effects of different physiological-like fluids on material properties.

March 1996 - September 1996

Quebec Biomaterials Institute and Université Laval, Québec, Canada.
PhD stage, supervisors Dr. R. Guidoin and Prof. G. Laroche.
During the PhD stage, Silvia Farè investigated the morphological, and chemico-physical properties of commercial medical-grade polyurethanes and new synthesized polyurethanes for cardiovascular applications. In particular, the effect of different physiological-like environments was investigated. Main techniques used during the stage were as follows: infrared spectroscopy (ATR-FTIR), X-ray photoelectron spectroscopy (XPS), static contact angle instrument, differential scanning calorimetry (DSC).

November 1995 - March 1996

Joint Research Centre, Institute for Advanced Materials, Ispra (VA), Italy.
PhD stage, supervisor Dr. F. Brossa.
As a visiting PhD student, Silvia Farè, after the experience during the Master thesis, designed and developed novel surface treatments on metals and metal alloys for orthopaedic and dental applications (e.g., ion implantation, CVD, plasma spray). Chemico-physical characterization of surface treatments and *in vitro/in vivo* biological investigation were also performed.

February 1993 - October 1995

Joint Research Centre, Institute for Advanced Materials, Ispra (VA), Italy.
Master student stage, supervisor Dr. F. Brossa.
Silvia Farè performed her Master thesis at the Institute for Advanced Materials investigating surface treatments to improve the wear properties of Ti alloy. An appropriate experimental wear apparatus was designed and fabricated, improving the possible approached for studying the wear under dynamic conditions. After an appropriate training, Silvia Farè performed metallographic characterization, morphological analysis by laser profilometer, wettability by dynamic contact angle instrument.

PRESENT AND PAST SCIENTIFIC COLLABORATION

National and International Industries and Hospital

- **Istituti Ortopedici Rizzoli**, Bologna, Italy
- **Centro di Ricerca E. Menni**, Fondazione Poliambulanza-Istituto Ospedaliero, Brescia, Italy
- **INNOVHUB - SSI**, Div. Stazione Sperimentale per la Seta, Milan, Italy
- IRCCS Foundation - **Istituto Nazionale dei Tumori**, Milan, Italy
- Azienda Ospedaliera - **Ospedale Niguarda Ca' Granda Hospital**, Milan, Italy
- **Bioengineering Department Mario Negri Institute** for Pharmacological Research, Bergamo, Italy
- **Tecres S.p.A**., Verona, Italy
- **Plan1Health s.r.l.**, Villanova di S. Daniele del Friuli, Udine, Italy
- **Eurocoating S.p.A.**, Pergine, Trento, Italy
- **Gimac**, Castronno, Varese, Italy
- **Polymer Technology Group**, Berkeley, California, USA

- **Mitsubishi Heavy Industries LTD**, Nagoya R&D Center, Japan
- **Progentix Orhobiology BV**, Bilthoven, The Nederlands

National and International Universities and Research Centers

- **Prof. L. Visai**, Department of Biochemistry, Università degli Studi di Pavia, Italy
- **Prof. L. Rimondini**, **Prof. F. Boccafoschi**, Department of Life Science, Università del Piemonte Orientale "Amedeo Avogadro", Italy
- **Prof. A. Bandiera**, Department of Life Science, Università degli Studi di Trieste, Italy
- **Prof. A. Remuzzi**, Engineering Faculty, Università degli Studi di Bergamo, Italy
- **Prof. W. Swieszkowski**, Biomaterials Group, Materials Design Division, Faculty of Materials Science and Engineering, Warsaw University of Technology, Warsaw, Poland
- **Prof. A. R. Boccaccini**, Institute of Biomaterials, Department of Materials Science and Engineering, University of Erlangen-Nuremberg, Erlangen, Germany
- **Prof. H. Haugen**, Department of Biomaterials, Institute for Clinical Dentistry, University of Oslo, Oslo, Norway
- **Prof. L. Moroni**, **Prof. C. Mota**, MERLN Institute for Technology-Inspired Regenerative Medicine, Complex Tissue Regeneration Department, Maastricht, The Netherlands
- **Prof. M. Santin**, School of Pharmacy & Biomolecular Sciences, University of Brighton, Brighton, United Kingdom
- **Prof. B. Marelli**, Laboratory for Advanced Biopolymers, Department of Civil and Environmental Engineering, Massachusetts Institute of Technology, Cambridge, MA, USA
- **Prof. N.V. Dorrello**, Pediatric Critical Care Medicine, Columbia University Medical Center, New York, NY, USA
- **Prof. M.W. Rolle**, Department of Biomedical Engineering, Worcester Polytechnic Institute, Worcester, MA, USA
- **Prof. D. Kaplan**, Department of Biomedical Engineering, School of Engineering, Tufts University, Boston, Medford/Somerville & Grafton, MA, USA
- **Prof. D. Mantovani**, Department of Mining, Metallurgical, and Materials Engineering, Université Laval, Québec, QC, Canada
- **Prof. L.H. Yahia**, Institut de Génie Biomédical, École Polytechnique de Montréal, Montréal, QC, Canada
- **Prof. M. Tabrizian**, Biomedical Engineering Department, Mc Gill University, Montréal QC, Canada
- **Prof. G. Salmoria**, Universidade Federal de Santa Catarina, Departamento de Engenharia Mecânica, Florianópolis, Brasil
- **Prof. J. Cooper-White**, Tissue Engineering and Microfluidics Lab, Australian Institute for Bioengineering and Nanotechnology, University of Queensland, Brisbane, Australia

Milan, April 16th 2024

Signature
Silvia Farè

COMPLETE LIST OF PUBLICATIONS

Scientific Papers – Papers in International Journals

A.1 Armenio L, Farè S, Draghi L. A direct-writing electrospinning system for designing complex architectures in tissue engineering. Biomedical Physics and Engineering Express, 2024;10(2):027001. doi: 10.1088/2057-1976/ad1f03.

A.2 Liu HY, Predella C, Chen YW, Wang J, Pezet M, Liang S, Farè S, Murray JW, Saqi A, Vunjak-Novakovic G, Snoeck HW, Dorrello NV. Engraftment and injury repair in regionally conditioned rat lung in vivo by lung progenitors derived from human pluripotent stem cells. bioRxiv. 2023 Nov 29:2023.11.28.569060. doi: 10.1101/2023.11.28.569060. Preprint.

A.3 Pektas HK, Demidov Y, Ahvan A, Abie N, Georgieva VS, Chen S, Farè S, Brachvogel B, Mathur S, Maleki H. MXene-integrated silk fibroin-based self-assembly-driven 3D-printed theragenerative scaffolds for remotely photothermal anti-osteosarcoma ablation and bone regeneration. ACS Mater Au. 2023 Sep 8;3(6):711-726. doi: 10.1021/acsmaterialsau.3c00040.

A.4 Bonetti L, De Nardo L, Farè S. Crosslinking strategies in modulating methylcellulose hydrogel properties. Soft Matter. 2023 Oct 25;19(41):7869-7884. doi: 10.1039/d3sm00721a.

A.5 D Ribezzi, R Pinos, L Bonetti, M Cellani, F Barbaglio, C Scielzo, S Farè. Design of a novel bioink suitable for the 3D printing of lymphoid cells. Frontiers in Biomaterials Science. 2023 Feb 13;2:1081065. doi: 10.3389/fbiom.2023.1081065.

A.6 Miri Z, Farè S, Ma Q, Haugen HJ. Updates on polyurethane and its multifunctional applications in biomedical engineering. Prog Biomed Eng. 2023;5(4):042001. doi: 10.1088/2516-1091/acef84.

A.7 Pitton M, Ancona E, Farè S. Embedded 3D printing for the development of perfusable in vitro 3D model of soft tissue. Mater Lett. 2023 Jun 15;341:134259. doi: 10.1016/j.matlet.2023.134259

A.8 Paradiso A, Volpi M, Rinoldi C, Celikkin N, Contessi Negrini N, Bilgen M, Dallera G, Pierini F, Costantini M, Święszkowski W, Farè S. In vitro functional models for human liver diseases and drug screening: beyond animal testing. Biomater Sci. 2023 May 2;11(9):2988-3015. doi: 10.1039/d1bm01872h.

A.9 Al-Jawuschi N, Chen S, Abie N, Fischer T, Fare S, Maleki HH. Self-assembly-driven Bi_2S_3 nanobelts integrated a silk-fibroin-based 3D-printed aerogel-based scaffold with a dual-network structure for photothermal bone cancer therapy. Langmuir. 2023 Mar 28;39(12):4326-4337. doi: 10.1021/acs.langmuir.2c03334.

A.10 Pichler R, Rizzo L, Tröndle K, Bühler M, Brucker H, Müller AL, Grand K, Farè S, Viau A, Kaminski MM, Kuehn EW, Koch F, Zimmermann S, Koltay P, Lienkamp SS. Tuning the 3D microenvironment of reprogrammed tubule cells enhances biomimetic modeling of polycystic kidney disease. Biomaterials. 2022 Dec;291:121910. doi: 10.1016/j.biomaterials.2022.121910.

A.11 Grilli F, Pitton M, Altomare L, Farè S. Decellularized fennel and dill leaves as possible 3D channel network in GelMA for the development of an in vitro adipose tissue model. Front Bioeng Biotechnol. 2022 Oct 31;10:984805. doi: 10.3389/fbioe.2022.984805.

A.12 Bonetti L, Fiorati A, D'Agostino A, Pelacani CM, Chiesa R, Farè S, De Nardo L. Smart Methylcellulose hydrogels for pH-triggered delivery of silver nanoparticles. Gels. 2022 May 12;8(5):298. doi: 10.3390/gels8050298.

A.13 Contessi Negrini N, Ricci C, Bongiorni F, Trombi L, D'Alessandro D, Danti S, Farè S. An osteosarcoma model by 3D printed polyurethane scaffold and in vitro generated bone extracellular matrix. Cancers (Basel). 2022 Apr 15;14(8):2003. doi: 10.3390/cancers14082003.

A.14 Pitton M, Fiorati A, Buscemi S, Melone L, Farè S, Contessi Negrini N. 3D bioprinting of pectin-cellulose nanofibers multicomponent bioinks. Front Bioeng Biotechnol. 2021;9:732689. doi: 10.3389/fbioe.2021.732689.

A.15 Bonetti L, De Nardo L, Farè S. Chemically crosslinked methylcellulose substrates for cell sheet engineering. Gels. 2021 Sep 14;7(3):141. doi: 10.3390/gels7030141.

A.16 Sbrana FV, Pinos R, Barbaglio F, Ribezzi D, Scagnoli F, Scarfò L, Redwan IN, Martinez H, Farè S, Ghia P, Scielzo C. 3D bioprinting allows the establishment of long-term 3D culture model for chronic lymphocytic leukemia cells. Front Immunol. 2021 May 3;12:639572. doi: 10.3389/fimmu.2021.639572.

A.17 Tschon M, Brogini S, Parrilli A, Bertoldi S, Silini A, Parolini O, Faré S, Martini L, Veronesi F, Fini M, Giavaresi G. Assessment of the in vivo biofunctionality of a biomimetic hybrid scaffold for osteochondral tissue regeneration. Biotechnol Bioeng. 2021;118(1):465-480. doi: 10.1002/bit.27584.

A.18 Bonetti L, Fiorati A, Serafini A, Masotti G, Tana F, D'Agostino A, Draghi L, Altomare L, Chiesa R, Farè S, Bianchi M, Rizzi L, De Nardo L. Graphene nanoplatelets composite membranes for thermal comfort enhancement in performance textiles. J Appl Polym Sci. 2021;138(2):49645. doi: 10.1002/app.49645.

A.19 Cusanno A, Negrini NC, Villa T, Farè S, Garcia-Romeu ML, Palumbo G. Post forming analysis and in vitro biological characterization of AZ31B processed by incremental forming and coated with electrospun polycaprolactone. J Manuf Sci Eng. 2021;143(1):011012-1. doi: 10.1115/1.4048741.

A.20 Pinelli F, Nespoli T, Fiorati A, ,Farè S, Magagnin L, Rossi F. Graphene nanoplatelets can improve the performances of graphene oxide – polyaniline composite gas sensing aerogels. Carbon Trends. 2021 Oct;5:100123. doi: 10.1016/j.cartre.2021.100123.

A.21 Bonetti L, De Nardo L, Farè S. Thermo-Responsive Methylcellulose Hydrogels: From Design to Applications as Smart Biomaterials. Tissue Eng Part B Rev. 2020 Dec 8. doi: 10.1089/ten.TEB.2020.0202. Online ahead of print.

A.22 Addario G, Djudjaj S, Farè S, Boor P, Moroni L, Mota C. Microfluidic bioprinting towards a renal in vitro model. Bioprinting. 2020;20:e00108. doi: 10.1016/j.bprint.2020.e00108.

A.23 Ruggeri E, Kim D, Cao Y, Farè S, De Nardo L, Marelli B. A multilayered edible coating to extend produce shelf life. ACS Sustain Chem Eng. 2020;8(38):14312-21. doi:10.1021/acssuschemeng.0c03365.

A.24 Michelini L, Probo L, Farè S, Contessi Negrini N. Characterization of gelatin hydrogels derived from different animal sources. Mater Lett. 2020;272:127865. doi: 10.1016/j.matlet.2020.127865.

A.25 Contessi Negrini N, Toffoletto N, Farè S, Altomare L. Plant Tissues as 3D Natural Scaffolds for Adipose, Bone and Tendon Tissue Regeneration. Front Bioeng Biotechnol. 2020;8:723. doi: 10.3389/fbioe.2020.00723.

A.26 Bonetti L, Altomare L, Bono N, Panno E, Campiglio CE, Draghi L, Candiani G, Farè S, Boccaccini AR, De Nardo L. Electrophoretic processing of chitosan based composite scaffolds with Nb-doped bioactive glass for bone tissue regeneration. J Mater Sci Mater Med. 2020;31(5):43. doi: 10.1007/s10856-020-06378-6.

A.27 Fischetti T, Celikkin N, Contessi Negrini N, Farè S, Swieszkowski W. Tripolyphosphate-Crosslinked Chitosan/Gelatin Biocomposite Ink for 3D Printing of Uniaxial Scaffolds. Front Bioeng Biotechnol. 2020;8:400. doi: 10.3389/fbioe.2020.00400.

A.28 Contessi Negrini N, Lipreri MV, Tanzi MC, Farè S. In vitro cell delivery by gelatin microspheres prepared in water-in-oil emulsion. J Mater Sci Mater Med. 2020;31(3):26. doi: 10.1007/s10856-020-6363-2.

A.29 Bonetti L, De Nardo L, Variola F, Farè S. Evaluation of the subtle trade-off between physical stability and thermo-responsiveness in crosslinked methylcellulose hydrogels. Soft Matter. 2020 May 14. doi: 10.1039/d0sm00269k.

A.30 Bonetti L, De Nardo L, Variola F, Farè S. In-situ Raman spectroscopy: An effective technique for the quantification of LCST transition of methylcellulose hydrogels Mater Lett. 2020; 274,128011. doi: 10.1016/j.matlet.2020.128011

A.31 Contessi Negrini N, Celikkin N, Tarsini P, Farè S, Swieszkowski W. Three-dimensional printing of chemically crosslinked gelatin hydrogels for adipose tissue engineering. Biofabrication. 2020; 12(2):025001. doi: 10.1088/1758-5090/ab56f9.

A.32 Fiorati A, Contessi Negrini N, Baschenis E, Altomare L, Faré S, Giacometti Schieroni A, Piovani D, Mendichi R, Ferro M, Castiglione F, Mele A, Punta C, Melone L. TEMPO-Nanocellulose/Ca2+ Hydrogels: Ibuprofen Drug Diffusion and In Vitro Cytocompatibility. Materials (Basel). 2020;13(1). pii: E183. doi: 10.3390/ma13010183.

A.33 Vismara E, Bernardi A, Bongio C, Farè S, Pappalardo S, Serafini A, Pollegioni L, Rosini E, Torri G. Bacterial Nanocellulose and Its Surface Modification by Glycidyl Methacrylate and Ethylene Glycol Dimethacrylate. Incorporation of Vancomycin and Ciprofloxacin. Nanomaterials (Basel). 2019;9(12). pii: E1668. doi: 10.3390/nano9121668.

A.34 Campiglio CE, Contessi Negrini N, Farè S, Draghi L. Cross-Linking Strategies for Electrospun Gelatin Scaffolds. Materials (Basel). 2019;12(15). pii: E2476. doi: 10.3390/ma12152476.

A.35 Milazzo M, Contessi Negrini N, Scialla S, Marelli B, Farè S, Danti S, Buehler M. Additive Manufacturing Approaches for Hydroxyapatite-Reinforced Composites. Adv Funct Mater. 2019;29(35): 1903055. doi: 10.1002/adfm.201903055.

A.36 Ghalayani Esfahani A, Altomare L, Varoni EM, Bertoldi S, Farè S, De Nardo L. Electrophoretic bottom up design of chitosan patches for topical drug delivery. J Mater Sci Mater Med. 2019;30(4):40. doi: 10.1007/s10856-019-6242-x.

A.37 Contessi Negrini N, Bonnetier M, Giatsidis G, Orgill DP, Farè S, Marelli B. Tissue-mimicking gelatin scaffolds by alginate sacrificial templates for adipose tissue engineering. Acta Biomater. 2019;87:61-75. doi: 10.1016/j.actbio.2019.01.018.

A.38 Pimenta de Melo L, Contessi Negrini N, Farè S, de Mello Roesler CR, de Mello Gindri I, Salmoria GV. Thermomechanical and in vitro biological characterization of injection-molded PLGA craniofacial plates. J Appl Biomater Funct Mater. 2019;17(1):2280800019831599. doi: 10.1177/2280800019831599.

A.39 Damanik FFR, Spadolini G, Rotmans J, Farè S, Moroni L. Biological activity of human mesenchymal stromal cells on polymeric electrospun scaffolds. Biomater Sci. 2019;7(3):1088-1100. doi: 10.1039/c8bm00693h.

A.40 Contessi Negrini N, Tarsini P, Tanzi MC, Farè S. Chemically crosslinked gelatin hydrogels as scaffolding materials for adipose tissue engineering. J Appl Polym Sci. 2019;136(8):47104. doi: 10.1002/app.47104.

A.41 Santi R, Cigada A, Del Curto B, Farè S. Modulable properties of PVA/cellulose fiber composites. J Appl Biomater Funct Mater. 2019;17(1):2280800019831224. doi: 10.1177/2280800019831224.

A.42 Ghalayani Esfahani A, Lazazzera B, Draghi L, Farè S, Chiesa R, De Nardo L, Billi F. Bactericidal activity of gallium-doped chitosan coatings against staphylococcal infection. J Appl Microbiol. 2019;126(1):87-101. doi: 10.1111/jam.14133.

A.43 Gritsch L, Motta FL, Contessi Negrini N, Yahia L, Farè S. Crosslinked gelatin hydrogels as carriers for controlled heparin release. Mater Lett. 2018;228:375-378. doi: 10.1016/j.matlet.2018.06.047.

A.44 Contessi Negrini N, Bonetti L, Contili L, Farè S. 3D printing of methylcellulose-based hydrogels. Bioprinting. 2018;10:e00024. doi: 10.1016/j.bprint.2018.e00024.

A.45 Borzenkov M, Moros M, Tortiglione C, Bertoldi S, Contessi N, Faré S, Taglietti A, D'Agostino A, Pallavicini P, Collini M, Chirico G. Fabrication of photothermally active poly(vinyl alcohol) films with gold nanostars for antibacterial applications. Beilstein J Nanotechnol. 2018;9:2040-2048. doi: 10.3762/bjnano.9.193.

A.46 Altomare L, Bonetti L, Campiglio CE, De Nardo L, Draghi L, Tana F, Farè S. Biopolymer-based strategies in the design of smart medical devices and artificial organs. Int J Artif Organs. 2018;41(6):337-359. doi: 10.1177/0391398818765323.

A.47 Cochis A, Bonetti L, Sorrentino R, Contessi Negrini N, Grassi F, Leigheb M, Rimondini L, Farè S. 3D Printing of Thermo-Responsive Methylcellulose Hydrogels for Cell-Sheet Engineering. Materials (Basel). 2018;11(4). pii: E579. doi: 10.3390/ma11040579.

A.48 Silini AR, Spoldi V, De Munari S, Vertua E, Munarin F, Petrini P, Farè S, Parolini O. Immunological and differentiation properties of amniotic cells are retained after immobilization in pectin gel. Cell Transplant. 2018;27(1):70-76. doi: 10.1177/0963689717738786.

A.49 Meskinfam M, Bertoldi S, Albanese N, Cerri A, Tanzi MC, Imani R, Baheiraei N, Farokhi M, Farè S. Polyurethane foam/nano hydroxyapatite composite as a suitable scaffold for bone tissue regeneration. Mater Sci Eng C Mater Biol Appl. 2018;82:130-140. doi: 10.1016/j.msec.2017.08.064.

A.50 Salmoria GV, Sibilia F, Henschel VG, Farè S, Tanzi MC. Structure and properties of polycaprolactone/ibuprofen rods prepared by melt extrusion for implantable drug delivery. Polym Bull. 2017;74(12):4973-4987. doi: 10.1007/s00289-017-1999-x.

A.51 Contessi N, Altomare L, Filipponi A, Farè S. Thermo-responsive properties of methylcellulose hydrogels for cell sheet engineering. Mater Lett. 2017;207:157-160. doi: 10.1016/j.matlet.2017.07.023

A.52 Angeloni V, Contessi N, De Marco C, Bertoldi S, Tanzi MC, Daidone MG, Farè S. Polyurethane foam scaffold as in vitro model for breast cancer bone metastasis. Acta Biomater. 2017;63:306-316. doi: 10.1016/j.actbio.2017.09.017.

A.53 Hendrikson WJ, Rouwkema J, Clementi F, van Blitterswijk CA, Farè S, Moroni L. Towards 4D printed scaffolds for tissue engineering: exploiting 3D shape memory polymers to deliver time-controlled stimulus on cultured cells. Biofabrication. 2017;9(3):031001. doi: 10.1088/1758-5090/aa8114.

A.54 Salmoria GV, Sibilia F, Gindri IM, Roesler CRM, Farè S, Tanzi MC. Ibuprofen-loaded PCL meshes manufactured using rapid tooling for ocular orbital repair. Polym Test. 2017;62:33-40. doi: 10.1016/j.polymertesting.2017.06.009

A.55 Pezzoli D, Cauli E, Chevallier P, Farè S, Mantovani D. Biomimetic coating of cross-linked gelatin to improve mechanical and biological properties of electrospun PET: A promising approach for small caliber vascular graft applications. J Biomed Mater Res A. 2017;105(9):2405-2415. doi: 10.1002/jbm.a.36098.

A.56 Marcolin C, Draghi L, Tanzi M, Faré S. Electrospun silk fibroin-gelatin composite tubular matrices as scaffolds for small diameter blood vessel regeneration. J Mater Sci Mater Med. 2017;28(5):80. doi: 10.1007/s10856-017-5884-9.

A.57 Tresoldi C, Stefani I, Ferracci G, Bertoldi S, Pellegata AF, Farè S, Mantero S. Alternating air-medium exposure in rotating bioreactors optimizes cell metabolism in 3D novel tubular scaffold polyurethane foams. J Appl Biomater Funct Mater. 2017;15(2):e122-e132. doi: 10.5301/jabfm.5000334.

A.58 Cochis A, Grad S, Stoddart MJ, Farè S, Altomare L, Azzimonti B, Alini M, Rimondini L. Bioreactor mechanically guided 3D mesenchymal stem cell chondrogenesis using a biocompatible novel thermo-reversible methylcellulose-based hydrogel. Sci Rep. 2017;7:45018. doi: 10.1038/srep45018.

A.59 Cicala G, Latteri A, Del Curto B, Lo Russo A, Recca G, Farè S. Engineering thermoplastics for additive manufacturing: a critical perspective with experimental evidence to support functional applications. J Appl Biomater Funct Mater. 2017;15(1):0. doi: 10.5301/jabfm.5000343.

A.60 Del Curto B, Barelli N, Profaizer M, Farè S, Tanzi MC, Cigada A, Ognibene G, Recca G, Cicala G. Poly-paper: a sustainable material for packaging, based on recycled paper and recyclable with paper. J Appl Biomater Funct Mater. 2016;14(4):e490-e495. doi: 10.5301/jabfm.5000335.

A.61 Raimondi MT, Bertoldi S, Caddeo S, Farè S, Arrigoni C, Moretti M. The effect of polyurethane scaffold surface treatments on the adhesion of chondrocytes subjected to interstitial perfusion culture. Tissue Eng Regen Med. 2016;13(4):364-374. doi: 10.1007/s13770-016-9047-8.

A.62 Hejazi F, Mirzadeh H, Contessi N, Tanzi MC, Faré S. Novel class of collector in electrospinning device for the fabrication of 3D nanofibrous structure for large defect load-bearing tissue engineering application. J Biomed Mater Res A. 2017;105(5):1535-1548. doi: 10.1002/jbm.a.35822.

A.63 Altomare L, Cochis A, Carletta A, Rimondini L, Farè S. Thermo-responsive methylcellulose hydrogels as temporary substrate for cell sheet biofabrication. J Mater Sci Mater Med. 2016;27(5):95. doi: 10.1007/s10856-016-5703-8.

A.64 Farè S, Bertoldi S, Meskinfam M, Spoldi V, Tanzi MC, Parolini O. Biomimetic hybrid scaffolds for osteo-chondral tissue repair: Design and osteogenic differentiation of human placenta-derived cells (hPDC). Conf Proc IEEE Eng Med Biol Soc. 2015;2015:1753-6. doi: 10.1109/EMBC.2015.7318717.

A.65 Draghi L, Brunelli D, Farè S, Tanzi MC. Programmed cell delivery from biodegradable microcapsules for tissue repair. J Biomater Sci Polym Ed. 2015;26(15):1002-12. doi: 10.1080/09205063.2015.1070706.

A.66 Catto V, Farè S, Cattaneo I, Figliuzzi M, Alessandrino A, Freddi G, Remuzzi A, Tanzi MC. Small diameter electrospun silk fibroin vascular grafts: Mechanical properties, in vitro biodegradability, and in vivo biocompatibility. Mater Sci Eng C Mater Biol Appl. 2015;54:101-11. doi: 10.1016/j.msec.2015.05.003.

A.67 Bertoldi S, Farè S, Haugen HJ, Tanzi MC. Exploiting novel sterilization techniques for porous polyurethane scaffolds. J Mater Sci Mater Med. 2015;26(5):182. doi: 10.1007/s10856-015-5509-0.

A.68 Naghashzargar E, Farè S, Catto V, Bertoldi S, Semnani D, Karbasi S, Tanzi MC. Nano/micro hybrid scaffold of PCL or P3HB nanofibers combined with silk fibroin for tendon and ligament tissue engineering. J Appl Biomater Funct Mater. 2015;13(2):e156-68. doi: 10.5301/jabfm.5000216.

A.69 Spelzini F, Manodoro S, Frigerio M, Nicolini G, Maggioni D, Donzelli E, Altomare L, Farè S, Veneziano F, Avezza F, Tredici G, Milani R. Stem cell augmented mesh materials: an in vitro and in vivo study. Int Urogynecol J. 2015;26(5):675-83. doi: 10.1007/s00192-014-2570-z.

A.70 Chirani N, Yahia LH, Gritsch L, Motta FL, Chirani S, Farè S. History and applications of hydrogels. J Biomedical Sci. 2015;4(2):13. doi:10.4172/2254-609X.100013.

A.71 Wu W, Petrini L, Altomare L, Farè S, Tremamunno R, Yu Z, Migliavacca F. Modeling and experimental studies of peeling of polymer coating for biodegradable magnesium alloy stents. Rare Metal Mat Eng. 2014;43(12):2877-2882. doi: 10.1016/S1875-5372(15)60025-X.

A.72 Catto V, Farè S, Freddi G, Tanzi MC. Vascular tissue engineering: recent advances in small diameter blood vessel regeneration. ISRN Vascular Medicine. 2014;2014:article ID 923030, 27 pages. doi.org/10.1155/2014/923030.

A.73 Barbieri D, Yuan HP, Luo XM, Farè S, Grijpma DW, de Bruijn JD. Influence of polymer molecular weight in osteoconductive composites for bone tissue regeneration. Acta Biomater. 2013;9(12):9401-13. doi: 10.1016/j.actbio.2013.07.026.

A.74 Farè S, Torricelli, P, Giavaresi G, Bertoldi S, Alessandrino A, Villa T, Fini M, Tanzi MC, Freddi G. In vitro study on silk fibroin textile structure for Anterior Cruciate Ligament regeneration. Mater Sci Eng C Mater Biol Appl. 2013;33(7):3601-8. doi: 10.1016/j.msec.2013.04.027.

A.75 Bayati V, Altomare L, Tanzi MC, Farè S. Adipose-derived stem cells could sense the nano-scale cues as myogenic-differentiating factors. J Mater Sci Mater Med. 2013;24(10):2439-47. doi: 10.1007/s10856-013-4983-5.

A.76 Barbieri D, de Bruijn JD, Luo X, Farè S, Grijpma DW, Yuan H. Controlling dynamic mechanical properties and degradation of composites for bone regeneration by means of filler content. J Mech Behav Biomed Mater. 2013;20:162-72. doi: 10.1016/j.jmbbm.2013.01.012.

A.77 Cattaneo I, Figliuzzi M, Azzollini N, Catto V, Farè S, Tanzi MC, Alessandrino A, Freddi G, Remuzzi A. In vivo regeneration of elastic lamina on fibroin biodegradable vascular scaffold. Int J Artif Organs 2013;36(3):166-74. doi: 10.5301/ijao.5000185.

A.78 Marelli B, Achilli M, Alessandrino A, Freddi G, Tanzi MC, Farè S, Mantovani D. Collagen-reinforced electrospun silk fibroin tubular construct as small calibre vascular graft. Macromol Biosci. 2012;12(11):1566-74. doi: 10.1002/mabi.201200195.

A.79 Nava MB, Bertoldi S, Forti M, Catanuto G, Vergnaghi D, Altomare L, Tanzi MC, Farè S. Effects of the magnetic resonance field on breast tissue expanders. Aesthetic Plast Surg. 2011;36(4):901-7. doi: 10.1007/s00266-012-9908-z.

A.80 De Nardo L, Bertoldi S, Cigada A, Tanzi MC, Haugen HJ, Farè S. Preparation and characterization of shape memory polymer scaffolds via solvent casting/particulate leaching. J Appl Biomater Funct Mater. 2012;10(2):119-26. doi: 10.5301/JABFM.2012.9706.

A.81 Bozzini S, Giuliano L, Altomare L, Petrini P, Bandiera A, Conconi MT, Farè S, Tanzi MC. Enzymatic cross-linking of human recombinant elastin (HELP) as biomimetic approach in vascular tissue engineering. J Mater Sci Mater Med. 2011;22(12):2641-50. doi: 10.1007/s10856-011-4451-z.

A.82 Bertoldi S, Farè S, Tanzi MC. Assessment of scaffold porosity: the new route of micro-CT. J Appl Biomater Biomech. 2011;9(3):165-75. doi: 10.5301/JABB.2011.8863.

A.83 Asnaghi MA, Candiani G, Farè S, Fiore GB, Petrini P, Raimondi MT, Soncini M, Mantero S. Trends in biomedical engineering: focus on regenerative medicine. J Appl Biomater Biomech. 2011;9(2):73-86. doi: 10.5301/JABB.2011.8562.

A.84 Tanzi MC, Bozzini S, Candiani G, Cigada A, De Nardo L, Farè S, Ganazzoli F, Gastaldi D, Levi M, Metrangolo P, Migliavacca F, Osellame R, Petrini P, Raffaini R, Resnati G, Vena P, Vesentini S, Zunino P. Trends in biomedical engineering: focus on smart bio-materials and drug delivery. J Appl Biomater Biomech. 2011;9(2):87-97. doi: 10.5301/JABB.2011.8563.

A.85 De Nardo L, Bertoldi S, Tanzi MC, Haugen HJ, Farè S. Shape memory polymer cellular solid design for medical applications. Smart Mater Struct. 2011;20(3):035004. doi: 10.1088/0964-1726/20/3/035004.

A.86 Marelli B, Alessandrino A, Farè S, Freddi G, Mantovani D, Tanzi MC. Compliant electrospun silk fibroin tubes for small vessel bypass grafting. Acta Biomater. 2010;6(10):4019-26. doi: 10.1016/j.actbio.2010.05.008.

A.87 Altomare L, Riehle M, Gadegaard N, Tanzi MC, Farè S. Microcontact printing of fibronectin on a biodegradable polymeric surface for skeletal muscle cell orientation. Int J Artif Organs. 2010;33(8):535-43.

A.88 De Nardo L, Moscatelli M, Silvi F, Tanzi MC, Yahia L, Farè S . Chemico-physical modifications induced by plasma and ozone sterilizations on shape memory polyurethane foams. J Mater Sci Mater Med. 2010;21(7):2067-78. doi: 10.1007/s10856-010-4082-9.

A.89 Altomare L, Gadegaard N, Visai L, Tanzi MC, Farè S . Biodegradable microgrooved polymeric surfaces obtained by photolithography for skeletal muscle cell orientation and myotube development. Acta Biomater. 2010;6(6):1948-57. doi: 10.1016/j.actbio.2009.12.040.

A.90 Bertoldi S, Farè S, Denegri M, Rossi D, Haugen HJ, Parolini O, Tanzi MC. Ability of polyurethane foams to support placenta-derived cell adhesion and osteogenic differentiation: preliminary results. J Mater Sci Mater Med. 2010;21(3):1005-11. doi: 10.1007/s10856-009-3953-4.

A.91 Munarin F, Petrini P, Farè S, Tanzi MC. Structural properties of polysaccharide-based microcapsules for soft tissue regeneration. J Mater Sci Mater Med. 2010;21(1):365-75. doi: 10.1007/s10856-009-3860-8.

A.92 Tanzi MC, Farè S. Adipose tissue engineering: state of the art, recent advances and innovative approaches. Expert Rev Med Devices. 2009;6(5):533-51. doi: 10.1586/ERD.09.37

A.93 De Nardo L, Alberti R, Cigada A, Yahia LH, Tanzi MC, Farè S. Shape memory polymer foams for cerebral aneurysms reparation: effects of plasma sterilization on physical properties and cytocompatibility. Acta Biomater. 2009;5(5):1508-18. doi: 10.1016/j.actbio.2008.11.017.

A.94 Zanetta M, Quirici N, Demarosi F, Tanzi MC, Rimondini L, Farè S. Ability of polyurethane foams to support cell proliferation and to stimulate MSCs differentiation to osteoblasts. Acta Biomater. 2009;5(4):1126-36. doi: 10.1016/j.actbio.2008.12.003.

A.95 Marelli B, Alessandrino A, Farè S, Tanzi MC, Freddi G. Electrospun silk fibroin tubular matrixes for small vessel bypass grafting. Mater Technol. 2009;24(1):52-7. doi: 10.1179/175355509X417945.

A.96 Pitarresi G, Palumbo FS, Cavallaro G, Farè S, Giammona G. Scaffolds based on hyaluronan crosslinked with a polyaminoacid: Novel candidates for tissue engineering application. J Biomed Mater Res A. 2008;87A(3):770-9. doi: 10.1002/jbm.a.31825.

A.97 Altomare L, Farè S. Cells response to topographic and chemical micropatterns. J Appl Biomater Biomech. 2008;6(3):132-43.

A.98 Alessandrino A, Marelli B, Arosio C, Farè S, Tanzi MC, Freddi G. Electrospun silk fibroin mats for tissue engineering. Eng Life Sci. 2008;8(3):219–25. DOI: 10.1002/elsc.200700067.

A.99 Farè S, Brunella MF, Bruschi S, Vitale E. *Ex-Vivo* characterization of three Björk-Shiley Delrin heart valves. J Heart Valve Dis. 2008;17(3):325-331.

A.100 De Nardo L, Farè S, Di Matteo V, Cipolla E, Saino E, Visai L, Speziale P, Tanzi MC. New heparinizable modified poly(carbonate urethane) surfaces diminishing bacterial colonization. J Mater Sci Mater Med. 2007;18(11):2109-15. doi: 10.1007/s10856-007-3083-9.

A.101 Farè S, De Nardo L, De Cicco S, Jovenitti M, Tanzi MC. Different processing methods to obtain porous structure in shape memory polymers. Mater Sci Forum Vols. 2007;539-543:663-8. online at http://www.scientific.net.

A.102 Giardino R, Nicoli Aldini N, Fini M, Tanzi MC, Farè S, Draghi L, Carpi A, Nicolini A, Giavaresi G. Bioabsorbable scaffold for *in situ* bone regeneration. Biomed Pharmacother. 2006;60(8):386-92. doi: 10.1016/j.biopha.2006.07.004.

A.103 Moscatelli M, Farè S, Del Vecchio E, Ferretto A, D'Angelo F, Giudici M, Chiesa R. Structural, mechanical and wear resistance assessment of UHMWPE orthopedic components. J Appl Biomater Biomech. 2006;4(3):165-71.

A.104 Farè S, Brunella MF, Bruschi S, Cigada A, Vitali E. Materials characterization of explanted mechanical heart valves and comparison to patients' clinical data. Int J Artif Organs. 2005;28(7):701-10.

A.105 Farè S, Valtulina V, Petrini P, Alessandrini E, Pietrocola G, Tanzi MC, Speziale P, Visai L. *In vitro* interaction of human fibroblasts and platelets with a shape-memory polyurethane. J Biomed Mater Res A. 2005;73A(1):1-11. doi: 10.1002/jbm.a.30193.

A.106 Dal Prà I, Petrini P, Chiarini A, Bozzini S, Farè S, Armato U. Silk fibroin-coated three-dimensional polyurethane scaffolds for tissue engineering: interactions with normal human fibroblasts. Tissue Eng. 2003;9(6):1113-21. doi: 10.1089/10763270360728026.

A.107 Petrini P, Farè S, Piva A, Tanzi MC. Design, synthesis and properties of polyurethane hydrogels for tissue engineering. J Mater Sci Mater Med. 2003;14(8):683-6. doi: 10.1023/A:1024955531173.

A.108 Rimondini L, Farè S, Chiesa R, Pedeferri MP, Carrassi A. The effect of composition, wettability and roughness of the substrate on *in vivo* early bacterial colonization of titanium. J Appl Biomater Biomech. 2003;1(2):131-8.

A.109 Tanzi MC, Farè S, Petrini P, Tanini A, Piscitelli E, Zecchi-Orlandini S, Brandi ML. Cytocompatibility of polyurethane foams as biointegrable matrices for the preparation of scaffolds for bone reconstruction. J Appl Biomater Biomech. 2003;1(1):58-66.

A.110 Visai L, Rindi S, Speziale P and Petrini P, Farè S, Tanzi MC. *In vitro* interactions of biomedical polyurethanes with macrophages and bacterial cells. J Biomater Appl. 2002;16(3):191-214. doi: 10.1106/088532802021175.

A.111 Tanzi MC, Farè S, Petrini P. *In vitro* stability of polyether and polycarbonate urethanes. J Biomater Appl. 2000;14(4):325-48. doi: 10.1106/7TJU-H1YA-4NYT-XL84.

A.112 Petrini P, De Ponti S, Farè S, Tanzi MC. Poly-urethane-maleamides for cardio-vascular applications: synthesis and properties. J Mater Sci Mater Med. 1999;10(12):711-4. doi: 10.1023/A:1008970904334.

A.113 Farè S, Petrini P, Motta A, Cigada A, Tanzi MC. Synergistic effects of oxidative environments and mechanical stress on the *in vitro* stability of poly-ether-urethane and poly-carbonate-urethanes. J Biomed Mater Res. 1999;45(1):62-74.

A.114 Rimondini L, Farè S, Felloni A, Brambilla E, Brossa F, Consonni C, Carrassi A. The effect of surface roughness on *in vivo* plaque colonization on titanium. J Periodontol. 1997;68(6):556-62. doi: 10.1902/jop.1997.68.6.556.

A.115 Brossa F, Cigada A, Farè S, Chiesa R, Paracchini L. Tribological behaviour of Ti6Al4V modified by surface treatments. J Mater Sci Mater Med. 1996;7(8):471-4. doi: 10.1007/BF00705427.

Scientific Papers – Papers on International Books

B.1 Bertoldi S, Farè S, Moscatelli M, Addis A, Vitari F, Domeneghini C, Tanzi MC. In vivo biodegradation of polyurethane foams in the rat animal model. In: *Nanotechnology for functional repair and regenerative medicine*, *XI Ceramic, Cells and Tissues Annual Meeting*. Ravaglioli A, Krajewski A Eds., ISTEC-CNR Edition, 2007, Faenza, RA (Italy), 120-7. ISBN: 88-8080-085-X.

B.2 De Nardo L, Farè S, Resta S, Draghi L, Tanzi MC. Ca/P coated SMP as filler of bone defects in mini-invasive surgical procedures. In *Materials for tissue engineering*, *IX Ceramic, Cells and Tissues Annual Meeting*. Ravaglioli A, Krajewski A Eds., ISTEC-CNR Edition, 2004, Faenza, RA (Italy), 322-9. ISBN: 88-8080-056-6.

B.3 Tanzi MC, Petrini P, Farè S. Advanced polyurethanes for blood contacting applications containing PIME as “smart” heparin-adsorbing moieties. In: *Advanced Biomaterials for Medical Applications*, NATO Science Series. Thomas DW Ed., Kluwer Academic Publisher, The Netherlands, 2004, 180:51-66. ISBN: 1-4020-2906-3.

B.4 Farè S, Draghi L, Petrini P, Bozzini S, Tanzi MC. Hydrophilic polyurethanes/Ca-P composite scaffolds for bone regeneration. In *Bioceramic Surfaces: behaviour in vitro and in vivo, VIII Ceramic, Cells and Tissues Annual Meeting*. Ravaglioli A, Krajewski A, ISTEC-CNR Edition, 2003, Faenza, RA (Italy), 365-73. ISBN: 88-8080-045-0.

B.5 Farè S, Fulgini D, Tanzi MC. A preliminary investigation on the aptitude of shape memory polyurethanes as biomaterials. In: *Advanced Materials for Biomedical Application*, Mantovani D Ed., Copyright Canadian Institute of Mining, Metallurgy and Petroleum, 2002, 133-41. ISBN: 1-894475-25-9.

B.6 Farè S, Petrini P, Tanzi MC, Bigi A, Roveri N. Biointegrable 3D Polyurethane / α-TCP Composites for bone reconstruction. In: *Advanced Materials for Biomedical Application*, Mantovani D Ed., Copyright Canadian Institute of Mining, Metallurgy and Petroleum, 2002, 17-26. ISBN: 1-894475-25-9.

B.7 Brunella MF, Bosi B, Chiesa R, Cigada A, Farè S, Agati S, Bruschi S, Vitali E . Heart valves retrieval failure analysis vs. clinical data. In: *Advanced Materials for Biomedical Application*, Mantovani D Ed., Copyright Canadian Institute of Mining, Metallurgy and Petroleum, 2002, 247-56. ISBN: 1-894475-25-9.

B.8 Petrini P, Chiarini A, Bozzini S, Dal Pra I, Farè S, Armato U. Silk fibroin-polyurethane scaffolds for tissue engineering. *IEEE-EMBS Special Topic Conference on Molecular Cellular and Tissue Engineering*, MCTE, 2002, 43-5. ISBN: 0-7803-7557-2.

B.9 Farè S, Petrini P, Tanzi MC. 3D polyurethane/α-TCP composite scaffolds for bone tissue engineering. *IEEE-EMBS Special Topic Conference on Molecular Cellular and Tissue Engineering*, MCTE, 2002, 40-2. ISBN: 0-7803-7557-2.

B.10 Petrini P, Visai L, Liffredo C, Farè S, Speziale P, Tanzi MC. Protein immobilization onto newly developed polyurethane-maleamides for endothelial cell growth. In: *Biomedical Polymers Including Polymer Therapeutics*, Chiellini E et Al. Eds., Kluwer Academic /Plenum Press, 2001, 18:235-42. ISBN: 0-306-46472-1.

B.11 Rimondini L, Carrassi A, Brambilla E, Farè S, Brossa F. The effect of surface roughness on microbial colonization. An *in vivo* study of oral implant titanium. In: *Ceramics, Cells and Tissues. Ceramics in Oral Surgery*, Ravaglioli A, Krajewski A, ISTEC-CNR Edition, 1996, Faenza, RA (Italy), 83-8. ISBN: 88-8080-019-1.

B.12 Brossa F, Cigada A, Farè S, Paracchini L, Chiesa R. The influence of surface modifications on wear of hip joints prostheses. In: *Surface Modification Technologies VIII*, Sudarshan TS and Jeandin M Eds., 1995, 856-61. ISBN: 0-90171-669-3.

Scientific Papers – Short Papers and International Conference Proceedings

C.1 Palumbo G, Cusanno A, Romeu MLG, Bagudanch I, Contessi Negrini N, Villa T, Farè S. Single Point Incremental Forming and Electrospinning to produce biodegradable magnesium (AZ31) biomedical prostheses coated with porous PCL. Materials Today-Proceedings. 1st International Conference on Materials, Mimicking, Manufacturing from and for Bio Application (BioM&M), 2019; 7:394-401. doi: 10.1016/j.matpr.2018.11.101.

C.2 Kharaghani D, Meskinfam M, Bertoldi S, Imani R, Balagholi S, Rezaeikanavi M, Tanzi MC, Farè S. Biomimetic Hybrid Scaffolds for eye orbital bone tissue engineering. Investigative Ophthalmology & Visual Science. 2015;57(12):221. Annual Meeting of the Association-for-Research-in-Vision-and-Ophthalmology (ARVO), Seattle, WA (USA), 1-5 May, 2016; 57(12):221. WOS: 000394174001065.

C.3 Farè S, Bertoldi S, Meskinfam M, Spoldi V, Tanzi MC, Parolini O. Biomimetic hybrid scaffolds for osteo-chondral tissue repair: Design and osteogenic differentiation of human placenta-derived cells (hPDC). Proceedings of the Annual International Conference of the IEEE Engineering in Medicine and Biology Society, EMBS. MiCo Center, Milano Congressi Center, Italy, 2015, 1753-1756. ISBN: 9781424492718, 5, doi: 10.1109/EMBC.2015.7318717.

C.4 Tresoldi C, Stefani I, Bertoldi S, Fare S, Mantero S. The alternating air-medium exposure in rotating bioreactors optimizes cell metabolic activities in 3d tubular scaffolds. Tissue Engineering Part A. 2015;21(suppl.1):S250-S250. WOS: 000360205202070.

C.5 Draghi L, Caliandro G, Farè S. Tuning the release of encapsulated cells from injectable, fast degradable microbeads. Frontiers in Bioengineering and Biotechnology. doi: 10.3389/conf.FBIOE.2016.01.00766

C.6 Altomare L, Petrini L, Migliavacca F, Farè S.PCL coatings on magnesium alloy. *European Cells and Materials* 2013:26(6):15. ISSN: 1473-2262.

C.7 Cilli D, Bertoldi S, Farè S, Tanzi MC, Cooper-White JJ. Interaction of MSCs with biomimetically-functionalized PU substrates for meniscal tissue engineering. *European Cells and Materials* 2013:26(6):78. ISSN: 1473-2262.

C.8 Catto V, Elia R, Freddi G, Tanzi MC, Farè S, Kaplan D. Silk tubular scaffolds for vascular tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine* 2012;6(suppl.1):180. ISSN: 1932-6254.

C.9 Bozzini S, Matacelo S, Gentilini R, Farè S, Minuzzo M, Mantovani R, Tanzi MC. Unfouling PEG-based substrates for cancer stem cells. *Journal of Tissue Engineering and Regenerative Medicine* 2012;6(suppl.1):203. ISSN: 1932-6254.

C.10 Cochis A, Carletta A, Altomare L, Farè S, Merlin S, Pietronave S, Follenzi A, Prat M, Rimondini L. Engineered cell sheets using thermo-reversible hydrogel. *Journal of Tissue Engineering and Regenerative Medicine* 2012;6(suppl.1):203-4. ISSN: 1932-6254.

C.11 Pietronave S, Cochis A, Zamperone A, Oltolina F, Carletta A, Altomare L, Farè S, Diena M, Rimondini L, Prat M. Thermo-responsive hydrogel for the generation of implantable cardiac progenitor cell (CPC) sheets for scaffold-less tissue engineering. *Journal of Tissue Engineering and Regenerative Medicine* 2012;6(suppl.1):385. ISSN: 1932-6254.

C.12 Catto V, Alessandrino A, Freddi G, Farè S, Tanzi MC. Electrospun silk fibroin matrices for small calibre vascular prosthesis: preparation and chemico-physical characterization. In Atti del Congresso Nazionale di Bioingegneria 2010, a cura di: Cappello A., D'Alessio T., Knaflitz M., Montevecchi F.M. Patron. 2010:329-330. ISBN: 9788855530828.

C.13 Altomare L, Visai L, Tanzi MC, Farè S. Immunofluorescence study of myotubes development on microgrooved surfaces. *Cytometry Part A* 2008;73A(1):97-8. ISSN: 1552-4922.

C.14 Bertoldi S, Farè S, Ciapetti G, Tanzi MC. Cross-linked polyurethane foams and composites for bone tissue engineering. *European Cells and Materials* 2007:14(Suppl.1):30. ISSN: 1473-2262.

C.15 Melone M, Calarco A, Petillo O, D'Apolito M, Tanzi MC, Farè S, Peluso G. Muscle tissue engineering: strategies for repair and regeneration in human degenerative muscle diseases. *Neuromuscular Disorders* 2007;17(9-10):874-5. DOI: 10.1016/j.nmd.2007.06.378. ISSN: 0960-8966.

C.16 Altomare L, Gadegaard N, Visai L, Tanzi MC, Farè S. Biodegradabile microgrooved surfaces for skeletal muscle regeneration. *Journal of Applied Biomaterials and Biomechanics* 2007;5(3):194. ISSN: 1722-6899.

C.17 Bertoldi S, Farè S, Ciapetti G, Tanzi MC. Polyurethane foams and Ca-P composites for bone tissue engineering. *Journal of Applied Biomaterials and Biomechanics* 2007;5(3):195. ISSN: 1722-6899.

C.18 Melone MAB, Petillo O, Calarco A, Torpedine A, D'Apolito M, Tanzi MC, Farè S, Draghi L, Peluso G. A comparative analysis of different biomaterials in the engineering of skeletal muscle using C2C12 cells *in vitro*. *Neuromuscular Disorders* 2006;16(suppl.1):S80. ISSN: 0960-8966.

C.19 Tanzi MC, Farè S, Draghi L, Altomare L. Scaffolds for muscle tissue engineering. *Basic and Applied Myology* 2006;16(3&4):117-8. ISSN: 1120-9992.

C.20 De Nardo L, Polizu S, Farè S, Draghi L, Tanzi Mc, Yahia LH. Effects of lo vacuum plasma sterilization on the chemico-physical and thermo-mechanical properties of CaloMER, a shape memory polymer. *Journal of Applied Biomaterials and Biomechanics* 2006;2:207. ISSN: 1722-6899.

C.21 Farè S, Alessandrino A, Petrini P, Freddi G, Tanzi MC. Preliminary study on silk woven structures as possible natural ligaments substitutes. *Journal of Applied Biomaterials and Biomechanics* 2006;2:209. ISSN: 1722-6899.

C.22 Boschi A, Colombo M, Alessandrino A, Farè S, Tanzi MC, Freddi G. Silk fibroin scaffolds for Anterior Cruciate Ligament reconstruction: in vitro biodegradation. *Journal of Applied Biomaterials and Biomechanics* 2006;4:58. ISSN: 1722-6899.

C.23 Farè S, Danielli M, Valtulina V, De Nardo L, Draghi L, Visai L, Speziale P, Tanzi MC. Cells and bacteria interaction of CaloMER, a shape memory polymer. *Journal of Applied Biomaterials and Biomechanics* 2004;2:210. ISSN: 1722-6899.

C.24 Farè S, Petrini P, Ciapetti G, Pagani S, Bozzini S, Baldini N, Tanzi MC. Cytocompatibility of hydrophilic polyurethane/Ca phosphates composite scaffolds for bone regeneration. *Tissue Engineering* 2003;9(4):847-8. ISSN: 1076-3279.

C.25 Bozzini S, Draghi L, Farè S . Studio della degradazione ossidativa *in vitro* di poliuretani commerciali medical-grade. In: *Corrosione e Protezione*, *V edizione*, Copyright 2002 AIM, 441-5. ISBN 88-85298-45-1.

C.26 Petrini P, Bozzini S, Farè S, Tanzi MC. Surface modification of polyurethane scaffolds with natural polymers: the use of silk fibroin. *European Cells and Materials* 2001:6(Suppl.1):30. ISSN: 1473-2262.

C.27 Farè S, Petrini P, Tanzi MC. Poliuretano-maleammidi per applicazioni cardiovascolari: sintesi e proprietà Biomateriali 99, Piconi C Ed., ENEA, May 2000. ISBN 88-8286-073-6.

C.28 Petrini P, Farè S, Brugora A, Tanzi MC. Schiume poliuretaniche come matrici di compositi per la sostituzione dell'osso. Biomateriali 99, Piconi C Ed., ENEA, May 2000. ISBN 88-8286-073-6.

C.29 Farè S, Motta A, Tanzi MC. Valutazione comparativa della stabilità ossidativa in vitro di cateteri in poliuretano. Biomateriali 99, Piconi C Ed., ENEA, May 2000. ISBN 88-8286-073-6.

C.30 Rimondini L, Farè S, Cigada A, Carrassi A. Effects of ions implantation and anodization on bacterial colonization of titanium. *Journal of Dental Research* 1998;77(5):1211. ISSN: 0022-0345.

Scientific Papers – Papers in National Journals

D.1 Petrini L, Wu W, Gastaldi D, Altomare L, Farè S, Migliavacca F, Demir AG, Previtali B, Vedani M. Development of biodegradable magnesium alloy stents with coating. Frattura ed Integrità Strutturale. 2014;8(29):364-375. doi: 10.3221/IGF-ESIS.29.32.

D.2 Bosi B, Brunella MF, Bruschi G, Chiesa R, Cigada A, Farè S, Vitali E. Correlazione clinica e morfologica-strutturale di protesi cardiache meccaniche espiantate. TUMORI 2003;89:13. ISSN: 0300-8916.

D.3 Farè S, Fulgini D, Tanzi MC. Poliuretani a memoria di forma: indagine chimico-fisica e meccanica sulle possibilità applicative come biomateriali. *Biomateriali* 2002;16(1/2/3):5-10.

D.4 Farè S, Fulgini D, Tanzi MC. Biomateriali intelligenti: i poliuretani a memoria di forma. *Biomateriali* 2001;15(3):20-1.

D.5 Farè S, Petrini P, S. Benvenuti, Piscitelli E, M. L. Brandi, Tanzi MC. Tridimensional polyurethane scaffolds for tissue engineering. *Biomateriali* 2000;14(2):31-3.

D.6 Tanzi MC, Farè S, Petrini P. HEPITAN®: a new family of heparinizable polymers for blood-contacting devices. *Biomateriali* 2000;14(3):21-2.

D.7 Petrini P, Moran CR, Farè S, Tanzi MC, Graham NB. Idrogeli di tipo poliuretano-urea e poliuretano-ammide lineari. *Biomateriali* 1998;12(1/2):17-21.

D.8 Farè S, Tanzi MC, Mantovani D, Wiget E, Cigada A, Laroche G. Poliuretani per protesi vascolari: invecchiamento in condizioni dinamiche in ambienti *physiological-like*. *Biomateriali* 1998;12(3/4).

SCIENTIFIC ABSTRACTS – Oral and Poster Presentation at International Meetings

E.1 Marino S, Guzzo E, Pitton M, Scielzo C, Farè S. *Development and Optimization of Blends for Chronic Lymphatic Leukemia In Vitro Models*. International Conference on Biofabrication (Biofab2023), 17-20 September 2023, Saskatoon, Canada. Oral Presentation.

E.2 International Conference on Biofabrication (Biofab2023), 17-20 September 2023, Saskatoon, Canada.

E.3 Barozzi D, Scagnoli F, Mantegazza F, Barbaglio F, Ribezzi D, Farè S, Vergani B, Berno V, Ghia P, Scielzo C. *Dynamic 3D culture promotes lymphoid tissue maturation and allows the study of Chronic Lymphocyitc Leukemia (CLL) cells dissemination in vitro*. 33rd Annual Conference of the European Society for Biomaterials, 4-8 September 2023, Davos, Switzerland. PoA.15.41.

E.4 Pravato S, Krattiger LA, Deshmukh DV, Dual J, Farè S, Tibbitt MW, Ehrbar M. *Tunable patterning of vascular networks for hierarchical tissue engineering*. 33rd Annual Conference of the European Society for Biomaterials, 4-8 September 2023, Davos, Switzerland. PoB.18.10.

E.5 Pitton M, Liguori C, Farè S. *Fresh printing of sacrificial 3D network for 3D in vitro models development*. 33rd Annual Conference of the European Society for Biomaterials, 4-8 September 2023, Davos, Switzerland. PoB.18.17.

E.6 Armenio L, Farè S, Draghi L. *Design of oriented structures for skeletal muscle regeneration through near-field direct writing electrospinning*. 33rd Annual Conference of the European Society for Biomaterials, 4-8 September 2023, Davos, Switzerland. PoB.23.06.

E.7 Pitton M, Contessi Negrini N, Draghi L, Farè S. *Visible light photocrosslinkable hydrogels for breast cancer microenvironment mimicking*. 33rd Annual Conference of the European Society for Biomaterials, 4-8 September 2023, Davos, Switzerland. S2.2-O2.

E.8 Graziani G, Farè S, Boi M, Sassoni E, Sartori M, Fini M, Avnet S, Fischetti T, Borciani G, Valle F, Baldini N. *Biogenic and biomimetic nanocoatings for bone modelling and regeneration*. TERMIS EU-Chapter Conference, Krakow, PL, 28th June-1st July, 2022. 20941835526.

E.9 Catalano D, Dalfino S, Pitton M, Farè S. *Drug-Loaded Alginate Microspheres For Breast Cancer Treatment*. TERMIS EU-Chapter Conference, Krakow, PL, 28th June-1st July, 2022. 41883642006.

E.10 Spadaro G, Pitton M, Fischetti T, Graziani G, Farè S. *GelMA/nHA Biomaterials Ink For Bone Tissue In Vitro Models*. TERMIS EU-Chapter Conference, Krakow, PL, 28th June-1st July, 2022. 31412758408.

E.11 Bonetti L, Fiorati A, D'Agostino A, Pelacani CM, Chiesa R, Farè S, De Nardo L. *Methylcellulose-based responsive hydrogels for controlled delivery of silver nanoparticles*. 32nd Annual Conference of the European Society for Biomaterials, 4-8 September 2022, Bordeaux, France. P12.

E.12 Grilli F, Pitton M, Contessi Negrini N, Altomare L, Farè S. *A novel approach for vascularization in 3D in vitro adipose tissue models*. 32nd Annual Conference of the European Society for Biomaterials, 4-8 September 2022, Bordeaux, France. O4.

E.13 Pitton M, Pellegatta D, Vandoni D, Contessi Negrini N, Farè S. *3D printed PLA scaffolds with double porosity for bone tissue engineering*. 32nd Annual Conference of the European Society for Biomaterials, 4-8 September 2022, Bordeaux, France. B-02.

E.14 Catalano D, Dalfino S, Pitton M, Farè S. *Development and optimization of a Drug Delivery System based on alginate microspheres*. 32nd Annual Conference of the European Society for Biomaterials, 4-8 September 2022, Bordeaux, France. C-03.

E.15 Piccininni A, Guglielmi P, Cusanno A, Pitton M, Serratore G, Ambrogio G, Farè S, Chiesa R, Palumbo G. *The influence of the manufacturing process conditions on the in-vitro bio-performance of Titanium alloys*. Procedia CIRP. 2022;110(C):111 – 116. 5th CIRP Conference on Biomanufacturing, Cirp BioM 2022, Calabria (Italy) 22-24 June 2022. doi: 10.1016/j.procir.2022.06.071.

E.16 Addario G, Djudjaj S, Farè S, Boor P, Moroni L, Carlos Mota C. *Bioprinting of a renal in vitro model*. 6th World TERMIS Conference 2021, Maastricht, NL, 15-19 November, 2021 (virtual). Abstract #58.

E.17 Pitton M, Urzì C, Contessi Negrini N, Farè S. *Photocrosslinked GelMA/hyaluronic acid hydrogels as adipose tissue in vitro models*. 6th World TERMIS Conference 2021, Maastricht, NL, 15-19 November, 2021 (virtual). Abstract #704.

E.18 Vandoni D, Pellegatta D, Contessi Negrini N, Farè S. *3D printing of double-porous PLA scaffolds for bone tissue engineering*. 6th World TERMIS Conference 2021, Maastricht, NL, 15-19 November, 2021 (virtual). Abstract #706.

E.19 Ribezzi D, Barbaglio F, Pinos R, Bonetti L, Farè S, Scielzo C. *Design of a novel bioink suitable for the 3D printing of lymphoid cells*. 6th World TERMIS Conference 2021, Maastricht, NL, 15-19 November, 2021 (virtual). Abstract #1931.

E.20 Palumbo G, Cusanno A, Garcia Romeu ML, Bagudanch I, Contessi Negrini N, Villa T, Farè S. *Single Point Incremental Forming and Electrospinning to produce biodegradable magnesium (AZ31) biomedical prostheses coated with porous PCL*. Mater Today-Proc. 2019;7:394–401.

E.21 Salmoria GV, Henschel VG, Vieira LF, Roesler CRM, Sibilia F, Farè S, Tanzi MC. *Development of bioabsorbable PCL/ibuprofen mesh for maxillofacial repair using prototype injection mold*. High Value Manufacturing: Advanced Research in Virtual and Rapid Prototyping - Proceedings of the 6th International Conference on Advanced Research and Rapid Prototyping, VR@P 2013, 2014;355–359.

E.22 Santi R, Marinelli A, Faré S, Del Curto B. Designing new sustainable materials. *Proceedings of the 3rd International Conference on Environmental Design*, 2019, Marsala, Italy, 173-180. ISBN: 9788855090636.

E.23 Contessi Negrini N, Bozzari I, Barbuto M, De Nardo L, Farè S. Gelatin 3D printing as tool for geometrically defined cell seeding. TERMIS Worskshop *3D printing in muscoloskeletal tissue engineering*. Warsaw, Poland, 22/03/2018 - 23/03/2018, p. 33.

E.24 Wu W, Petrini L, Altomare L, Faré S, Tremamunno R, Demir Ag, Previtali B, Vedani M, Migliavacca F. Experiments and numerical simulations to evaluate peeling properties of polymeric coatings for degradable Mg stents. Proceedings of the 6th Symposium on Biodegradable Metals. Maratea, Italy, 24/08/2014 - 29/08/2014, European Cells & Materials, p. 6. ISSN: 1473-2262,

E.25 Cilli D, Farè S, Bertoldi S, Tanzi MC, Cooper-White JJ. Hybrid “polyurethane-gelatin” scaffolds for meniscal tissue. *From the design to the application of biomaterials. XXV Symposium of European Society for Biomaterial*s, 8-12 September, 2013, Madrid, Spain, OP130. ISBN: 9788469578315.

E.26 Bertoldi S, Barbieri D, Yuan H, de Bruijn JD, Farè S, Tanzi MC. Novel PU-based composite scaffolds for bone tissue engineering. *From the design to the application of biomaterials. XXV Symposium of European Society for Biomaterial*s, 8-12 September, 2013, Madrid, Spain, OP130. ISBN: 9788469578315.

E.27 Catto V, Elia R, Tanzi MC, Freddi G, Farè S, Kaplan DL. Two-layer silk tubular scaffolds for small diameter blood vessel regeneration. *Transaction of the 2013 Annual Meeting and Exposition: Biomaterials Revolution*, 10-13 April, 2013, Boston, Massachusetts, USA.

E.28 Pietronave S, Cochis A, Zamperone A, Oltolina F, Carletta A, Altomare L, Farè S, Novelli E, Diena M, Rimondini L, Prat M. Thermo-responsive hydrogel for the generation of implantable cardiac progenitor cell (CPCs) sheets for scaffold-less tissue engineering. *Transaction of the 3rd TERMIS World Congress Tissue Engineering and Regenerative Medicine*, 5-8 September, 2012, Vienna, Austria.

E.29 Catto V, Elia R, Freddi G, Tanzi MC, Farè S, Kaplan D. Silk tubular scaffolds for vascular tissue engineering. *Transaction of the 3rd TERMIS World Congress Tissue Engineering and Regenerative Medicine*, 5-8 September, 2012, Vienna, Austria.

E.30 Bozzini S, Matacelo S, Gentilini R, Farè S, Minuzzo M, Mantovani R, Tanzi MC. XXPEG matrices as substrates for in vitro culture of cancer stem cells. *Transaction of the 3rd International Congress on Biohydrogels*, 8-11 September, 2011, Florence, Italy, 83.

E.31 Bertoldi S, Farè S, Tanzi MC. *Effect of micro- and nano-sized hydroxyapatite fillers in PU composite scaffolds*. Transaction of the 24th European Conference on Biomaterials, 04-09 September, 2011, Dublin, Ireland, 506.

E.32 Barbieri D, Altomare L, Xu Q, Farè S, Grijpma DW, De Bruijn JD, Yuan H. Load-bearing composite for bone regeneration. Transaction of the 24th European Conference on Biomaterials, 04-09 September, 2011, Dublin, Ireland, 603.

E.33 Bertoldi S, Farè S, Rossi D, Haugen HJ, Parolini O, Tanzi MC. Placenta stem cells differentiation onto PU foams. *Transaction of the TERMIS EU Annual Meeting Tissue Engineering and Regenerative Medicine International Society*, 7-10 June, 2011, Granada, Spain.

E.34 Farè S, Gerges I, D'Ercole E, Altomare L, Tanzi MC. Innovative crosslinked gelatin hydrogels as key scaffolds for adipose stem cells differentiation. *Transaction of the TERMIS EU Annual Meeting Tissue Engineering and Regenerative Medicine International Society*, 7-10 June, 2011, Granada, Spain.

E.35 Farè S, Bertoldi S, Tanzi MC. Porous polyurethane composites as scaffolds for bone regeneration: comparison between micro- and nano- sized hydroxyapatite fillers. *Transaction of the Society for Biomaterials Annual Meeting and Exposition*, 13-16 April, 2011, Orlando, Florida, USA, 480.

E.36 Bertoldi S, Farè S, Rossi D, Haugen HJ, Parolini O, Tanzi MC. Placenta stem cells differentiation onto PU foams. *Transaction of the Society for Biomaterials Annual Meeting and Exposition*, 13-16 April, 2011, Orlando, Florida, USA, 398.

E.37 Martinuzzi M, Marchetti S, Bandiera A, Farè S, Tanzi MC. Towards molecular farming of a human elastin-like polymer in plants. *Transaction of the Society for Biomaterials Annual Meeting and Exposition*, 13-16 April, 2011, Orlando, Florida, USA, 98.

E.38 Farè S, Martinuzzi M, Bozzini S, Bandiera A, Marchetti S, Tanzi MC. A comparative study with recombinant human elastin-like protein from *E. Coli* and Rice. *Proceeding of the 7th International Conference on Polymer and Textile Biotechnology*, 2-4 March, 2011, Milan, Italy, 1.

E.39 Catto V, Bonandrini B, Alessandrino A, Freddi G, Farè S, Remuzzi A, Tanzi MC. Silk fibroin electrospun tubular matrices as innovative small caliber vascular grafts. *Transaction of the 23rd European Conference on Biomaterials*, 11-15 September, 2010, Tampere, Finland, 1.

E.40 De Nardo L, S. Bertoldi, Tanzi M.C., H.J. Haugen, Farè S. Shape memory polymer foams for biomedical applications: the role of transformation processes. *Transaction 23rd European Conference on Biomaterials*, 11-15 September, 2010, Tampere, Finland, 1.

E.41 Altomare L, Di Carlo MC, De Nova L, Migliavacca F, Farè S. Polymeric coating for bioabsorbable Mg-alloy stents. *Proceedings of the 2nd Symposium on Biodegradable Metals*, 31 August-3 September, 2010, Maratea, PZ, Italy, 105-107.

E.42 Bozzini S, Farè S, Altomare L, Petrini P, Bandiera A, Tanzi MC. Human elastin-like polypeptides: recombinant biopolymers for regenerative medicine. *European Cells & Materials*, 2010;20(Suppl. 3):27. *3rd International NanoBio Conference* 24-27 August,-2010, Zurich, Switzerland, 27. ISSN: 1473-2262.

E.43 Catto V, Barni A, Alessandrino A, Farè S, Tanzi MC, Freddi G. Electrospun silk fibroin matrices for tissue engineering applications. Proceedings of the 22nd International IFATCC Congress, 5-7 May, 2010, Stresa, VB, Italy.

E.44 Altomare L, Lozza L, Stucchi C, Tanzi MC, Nava M, Farè S. Effects of radiation therapy onsilicone prostheses with different gel cohesivity. *Proceedings of the Society for Biomaterials Annual Meeting*, 21-24 April, 2010, 646.

E.45 Levato R, Altomare L, Farè S, Tanzi MC. Soft scaffolds for adipose tissue engineering based on poly ethylene glycol - gelatin systems. *Proceedings of the Society for Biomaterials Annual Meeting*, 21-24 April, 2010, 334

E.46 Farè S, Rinaldi L, Catto V, Barni A, Alessandrino A, Freddi G, Tanzi MC. Electrospun silk fibroin as nanostructured matrices for tissue engineering., Quebec (QC, Canada), 2009, 33.

E.47 Altomare L, Riehle M, Gadegaard N, Tanzi MC, Farè S. Biodegradable patterned surfaces for skeletal muscle regeneration. *Abstract Book, 2nd China-Europe Symposium on Biomaterials in Regenerative Medicine*, 16-20 November, 2009, Barcelona, Spain.

E.48 Munarin F, Petrini P, Farè S, Barbosa MA, Tanzi MC, Granja PL. Electrostatically extrude pectin microspheres and their chemico-physical properties. *Abstract Book, 2nd China-Europe Symposium on Biomaterials in Regenerative Medicine*, 16-20 November, 2009, Barcelona, Spain.

E.49 Farè S, Bertoldi S, Menozzi A, Spano A, Nava M, Tanzi MC. Morphological and mechanical characterization of explanted silicone breast implants. *Abstract Book, 2nd China-Europe Symposium on Biomaterials in Regenerative Medicine*, 16-20 November, 2009, Barcelona, Spain.

E.50 Bertoldi S, Farè S, Denegri M, Haugen HJ, Parolini O, Tanzi MC. Polyurethane foams ability to support placenta-derived stem cells proliferation and osteoblast differentiation. *Proceedings of the 22nd European Conference on Biomaterials*, 7-11 September, 2009, Lausanne, Switzerland, T105-198.

E.51 Brunella MF, Bruschi G, Farè S. Characterization of explanted bileaflet mechanical heart valves and correlation with patients' clinical data. *Proceedings of the12th International Conference on Fracture*, 12-17 July, 2009, Ottawa, Ontario, Canada, 00296. ISBN: 978-161738227-7.

E.52 Farè S, Tanzi MC, Pennati A, Catanuto G, Spano A, Nava M, Bertoldi S. Breast implants failure: correlation of explanted implants properties and patient's clinical data. *Proceedings of the12th International Conference on Fracture*, 12-17 July, 2009, Ottawa, Ontario, Canada, 00213. ISBN: 978-161738227-7.

E.53 Bozzini S, Bandiera A, Farè S, Fotticchia A, Petrini P, Tanzi MC. HELP (human elastin-like polypeptide) as a key component in matrices for regenerative medicine. *Transactions of the Society for Biomaterials 2009 Annual Meeting*, 22-25 April, 2009, San Antonio, Texas, USA.

E.54 Farè S, Maccagnan S, Fancellu D, Alessandrino A, Tanzi MC. From a micro-polymeric pipe to a mini-polymeric pulsating heat pipe. *Proceedings of the 6th International Conference HEFAT*, 30 June-02 July, 2008, Pretoria, South Africa, 218-222.

E.55 Barbieri D, Farè S, Bao C, van Blitterswijk C, de Bruijn J, Yuan H. Influence of nano-HA on biological properties of PLA-based composites. *Proceedings of 8th World Biomaterials Congress*, 28 May-1 June, 2008, Amsterdam RAI, The Netherlands, 974. ISBN: 978-161567080-2.

E.56 Bertoldi S, Farè S, Tanzi MC. Polyurethane/Ca-phosphates porous composites for bone tissue engineering. *Proceedings of 8th World Biomaterials Congress*, 28 May-1 June, 2008, Amsterdam RAI, The Netherlands, 619. ISBN: 978-161567080-2.

E.57 Marelli B, Arosio C, Alessandrino A, Freddi G, Mantovani D, Farè S, Tanzi MC. Compliant silk fibroin electrospun tubular matrices as innovative small caliber vascular grafts. *Proceedings of 8th World Biomaterials Congress*, 28 May-1 June, 2008, Amsterdam RAI, The Netherlands, 1160. ISBN: 978-161567080-2.

E.58 Altomare L, Gadegaard N, Visai L, Tanzi MC, Farè S. Microgrooved scaffolds for skeletal muscle tissue engineering. *Proceedings of 8th World Biomaterials Congress*, 28 May-1 June, 2008, Amsterdam RAI, The Netherlands, 989. ISBN: 978-161567080-2.

E.59 Zanetta M, Quirici N, Rimondini L, Demarosi F, Carrassi A, Tanzi MC, Farè S. Ability to support cell proliferation and to stimulate MSCs differentiation of polyurethane foams. *Proceedings of 8th World Biomaterials Congress*, 28 May-1 June, 2008, Amsterdam RAI, The Netherlands, 2335. ISBN: 978-161567080-2.

E.60 Farè S, Bertoldi S, Addis A, Vitari F, Domenighini C, Tanzi MC. Assessment of PU foams biodegradation by subcutaneous implantation the rat model. *Proceedings of 21th European Conference on Biomaterials*, 9-12 September, 2007, Brighton, UK.

E.61 Draghi L, Brunelli D, Farè S, Tanzi MC. Development of a micro-encapsulation system for controlled cell delivery. *Proceedings of Transaction of the 32th Annual Meeting, Society for Biomaterials*, 18-21 April, 2007, Chicago, Illinois, USA. ® Society for Biomaterials.

E.62 Farè S, de Nardo L, Brunella MF, Rondelli G, Cigada A, Jardine P, Yahia LH. Morphological characterization and corrosion resistance of tini foams for biomedical applications. *Proceedings of Transaction of the 32th Annual Meeting, Society for Biomaterials*, 18-21 April, 2007, Chicago, Illinois, USA. ® Society for Biomaterials.

E.63 Farè S, Bertoldi S, Moscatelli M, Tanzi MC, Addis A, Campagnol M, Domenighini C. Study of the *in vivo* degradation of polyurethanes 3D foams for bone reconstruction. *Proceedings of Transaction of the 32th Annual Meeting, Society for Biomaterials*, 18-21 April, 2007, Chicago, Illinois, USA. ® Society for Biomaterials.

E.64 De Nardo L, De Cicco S, Jovenitti M, Tanzi MC, Farè S . Smart scaffolds from shape memory polymer. *Proceedings of 20th European Conference on Biomaterials*, 27 September-1 October, 2006, Nantes, France, 217.

E.65 Farè S, De Nardo L, Cipolla E, Di Matteo V, Visai L, Tanzi MC. Antibacterial activity of novel heparin-adsorbing poly(carbonate urethane) surface. *Proceedings of 20th European Conference on Biomaterials*, 27 September-1 October, 2006, Nantes, France, 148.

E.66 Altomare L, Farè S, Draghi L, Tanzi MC. Cells guidance of microgrooved surfaces obtained by soft lithography. *Proceedings of 20th European Conference on Biomaterials*, 27 September-1 October, 2006, Nantes, France, 241.

E.67 Altomare L, Farè S, Draghi L, Tanzi MC. Effects of microgrooved surfaces on fibroblast cells orientation. *Proceedings of the 8th Biennial Conference on Engineering Systems Design and Analysis*, 4-7 July, 2006, Turin, Italy, 2006;2:531-8. ISBN: 978-0-7918-4249-2.

E.68 De Nardo L, De Cicco S, Jovenitti M, Tanzi MC, Farè S. Shape memory polymer porous structures for structures for mini-invasive surgical procedures. *Proceedings of the 8th Biennial Conference on Engineering Systems Design and Analysis*, 4-7 July, 2006, Turin, Italy, 2006;2:539-44. ISBN: 978-0-7918-4249-2.

E.69 Alessandrino A, Boschi A, Colombo M, Farè S, Tanzi MC, Freddi G. *In vitro* biodegradation of silk fibroin woven structures as scaffolds for Anterior Cruciate Ligament reconstruction. *Proceedings of 6th International Meeting Associazione Tessile e Salute*, 4-5 May, 2006, Biella, VC, Italy.

E.70 Alessandrino A, Boschi A, Colombo M, Farè S, Tanzi MC, Freddi G. *In vitro* biodegradation of fibroin woven scaffolds for Anterior Cruciate Ligament. *Proceedings of Transaction of the 31th Annual Meeting, Society for Biomaterials*, April 26-29, 2006, Pittsburgh, Pennsylvania, USA. ®Society for Biomaterials.

E.71 Farè S, De Marco C, Moscatelli M, Tanzi MC. CaP coating of polyurethane foams for bone regeneration. *Proceedings of Transaction of the 31th Annual Meeting, Society for Biomaterials*, April 26-29, 2006, Pittsburgh, Pennsylvania, USA. ® Society for Biomaterials.

E.72 De Nardo L, Farè S, Di Matteo V, Cipolla E, Visai L, Speziale P, Tanzi MC. New heparinizable poly(carbonate urethane) surfaces diminishing bacterial colonization. *Proceedings of the 1st Chinese-European Symposium on Biomaterials in Regenerative Medicine*, 3-7 April, 2006, Suzhou City (Jiangsu), China, 58.

E.73 Freddi G, Boschi A, Armato U, Chiarini A, Dal Pra I, Tanzi MC, Farè S, Alessandrino A. Silk: from luxury apparel textiles to high-tech applications. *Proceedings ATC , 05-32nd Aachen Textile Conference*, 23-24 November, 2005, Aachen, Germany, DWI Reports 2005;129:1-5 (CD-ROM).

E.74 Ciapetti G, Farè S, Pagani S, F. Perut, Devescovi V, Martini D, Tanzi MC, Baldini N. Growth and gene expression of human osteoblasts and bone marrow stromal cells on polyurethane/CaP scaffolds for bone engineering. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, CD-ROM, 25.

E.75 Alessandrino A, Farè S, Dal Pra I, Chiarini A, Armato U, Tanzi MC, Freddi G. Preliminary study on silk multifilament knitted structures as possible substitutes of natural ligaments. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, CD-ROM, T77.

E.76 Petrini P, Farè S, Resta S, Draghi L, Tanzi MC. Polyurethane foams as versatile scaffold for tissue engineering applications. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, 257.

E.77 Mattioli-Belmonte M, Farè S, Giantomassi F, Biagini G, Tanzi MC. The influence of UV light on the cytocompatibility of polyurethane foams for tissue engineering. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, 350.

E.78 Dal Pra I, Freddi G, Farè S, Chiarini A, Tanzi MC, Dauner M, Armato U. Non woven silk fibroin meshes as 3D scaffolds for tissue engineering: properties and *in vitro* biocompatibility. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, 353.

E.79 Farè S, Brunella MF, Tanzi MC. Protocol for chemico-physical and morphological evaluation of contact lens. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, 803.

E.80 De Nardo L, Locatelli E, Maccagnan S, Maccagnan G, Farè S, Tanzi MC. Polyester-based microtubes for minimal-invasive procedures. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, 467.

E.81 Brunella MF, Bruschi G, Cigada A, Farè S, Vitali E. Observation of explanted mechanical heart valves and clinical data: analysis of the possible correlation. *Proceedings 19th European Conference on Biomaterials*, 11-15 September, 2005, Sorrento, Italy, 469.

E.82 Dal Pra I, Freddi G, Farè S, Chiarini A, Tanzi MC, Dauner M, Armato U. Mechanical properties and *in vitro* biocompatibility of 3D non wovens based on *Bombyx Mori* silk fibroin. *5th World Textile Conference AUTEX 2005*, 27-29 June, 2005, Portorož, Slovenia, 117-121.

E.83 Freddi G, Boschi A, Tanzi MC, Farè S, Armato U, Chiarini A, Dal Pra I. Silk as biomaterial – Development of novel biomedical applications based on silk fibres. *20th IFATCC Congress*, 4-7 May, 2005, Weimar, Austria, 1-8.

E.84 Farè S, Tanzi MC, Alessandrino A, Freddi G. Silk woven structures as prospective scaffolds for ACL reconstruction. *Proceedings of the 30th Annual Meeting, Society for Biomaterials*, 27-30 April, 2005, Memphis, TN, USA, 433. © Society for Biomaterials.

E.85 Farè S, Brunella MF, Bruschi G, Cigada A, Vitali E. Analysis of explanted mechanical heart valves *IFMBE Proceedings, Medicon and Health Telematics* 2004, 2004;6:4 pages (su CD-ROM). ISBN: 88-7780-308-8.

E.86 Tanzi MC, Farè S, Petrini P. Antithrombogenic polyurethanes containing “smart” heparin-adsorbing moieties. *IFMBE Proceedings, Medicon and Health Telematics* 2004, 2004;6:4 pages (su CD-ROM). ISBN: 88-7780-308-8.

E.87 Petrini P, Farè S, Bozzini S, Tanzi MC. Innovative heparin-binding polyurethane hydrogel: synthesis and properties. *Transaction of the 7th World Biomaterials Congress*, 17-21 May, 2004, Sydney, Australia, 619. ISBN: 1-877040-19-3.

E.88 Farè S, Ciapetti G, Draghi L, Pagani S, Baldini N, Tanzi MC. Human osteoblasts interaction with porous polyurethane/CaP composite scaffolds for bone engineering. *Transaction of the 7th World Biomaterials Congress*, 17-21 May, 2004, Sydney, Australia, 666. ISBN: 1-877040-19-3.

E.89 De Nardo L, Polizu S, Farè S, Tanzi MC, Yahia LH. Plasma treatment and hydrolysis behavoir of CaloMER, a shape memory polymer. *Transaction of the 7th World Biomaterials Congress*, 17-21 May, 2004, Sydney, Australia, 1116. ISBN: 1-877040-19-3.

E.90 Farè S, Danielli M, De Nardo L, Tanzi MC. Thermomechanical properties and cell interaction of CaloMER, shape memory polymer. *Transaction of the 7th World Biomaterials Congress*, 17-21 May, 2004, Sydney, Australia, 1216. ISBN: 1-877040-19-3.

E.91 Farè S, Brunella MF, Bruschi S, Draghi L, Cigada A, Vitali E. Materials characterization of explanted mechanical heart valves and comparison to patients clinical data. *Transaction of the 7th World Biomaterials Congress*, 17-21 May, 2004, Sydney, Australia, 1859. ISBN: 1-877040-19-3.

E.92 Bozzini S, Chiarini A, Dal Pra I, Farè S, Petrini P, Tanzi MC, Armato U. Silk fibroin/polyurethane scaffolds: *in vitro* interactions with human adult fibroblasts. *Proceedings of 18th European Society of Biomaterials Conference*, 1-4 October, 2003, Stuttgart, Germany, P092. Copyright ESB.

E.93 Farè S, Petrini P, Bozzini S, Draghi L, Tanzi MC. Polyurethane/Ca phosphates composite scaffolds for bone regeneration with different chemical formulation. *Proceedings of 18th European Society of Biomaterials Conference*, 1-4 October, 2003, Stuttgart, Germany, P013. Copyright ESB.

E.94 Petrini P, Farè S, Portentoso A, Bozzini S, Tanzi MC. Porous PEO/polyurethane hydrogels: synthesis and properties. Transaction of 18th European Society of Biomaterials Conference, 1 –4 October 2003, Stuttgart (Germany), Copyright ESB, T003.

E.95 Visai L, Valtulina V, Farè S, Petrini P, Pent A, Poggio C. Restorative materials: *in vitro* cytotoxic effects to gingival fibroblasts. *Proceedings of 18th European Society of Biomaterials Conference*, 1-4 October, 2003, Stuttgart, Germany, P083. Copyright ESB.

E.96 Farè S, Brunella MF, Bruschi G, Draghi L, Cigada A, Vitali E. Materials characterization of explanted mechanical heart valves and comparison to patients clinical data. *Proceedings of 18th European Society of Biomaterials Conference*, 1-4 October, 2003, Stuttgart, Germany, 1284. Copyright ESB.

E.97 Ciapetti G, Farè S, Pagani S, Martini D., Tanzi MC, Baldini N, Giunti A. Human osteoblast culture on polyurethane/Ca Phosphate composite scaffolds for bone engineering. *Proceedings of 18th European Society of Biomaterials Conference*, 1-4 October, 2003, Stuttgart, Germany, P044. Copyright ESB.

E.98 Petrini P, Farè S, Portentoso A, Tanzi MC, Caronzolo D, Pannacci M, Carrabba G, Giussani C, Bello L. Crosslinked PEO/polyurethane hydrogels for drug release. *Proceedings of the 30th Annual Meeting and Exposition of the Controlled Release Society*, 19-23 July, 2003, Glasgow, UK, 451. Copyright CRS.

E.99 Petrini P, Farè S, Bozzini S, Tanzi MC, Chiarini A, Corato F, Dal Prà I, Armato U. Silk fibroin as coating of 2D and 3D polyurethane scaffolds for tissue engineering crosslinked. *Proceedings of the 3rd International Silk Conference*, 19-23 June, 2003, Montréal, QC, Canada.

E.100 Farè S, Pietrocola GP, Petrini P, Alessandrini E, Tanzi MC, Speziale P, Visai L. *In vitro* studies of Shape Memory Polyurethanes biocompatibility. *Proceedings of the 29th Annual Meeting of the Society for Biomaterials*, April 30-May 3, 2003, Reno, Nevada, USA, 661. Copyright SFB.

E.101 Farè S, Visai L, Pietrocola G, Alessandrini E, Petrini P, Speziale P, Tanzi MC. Shape memory polyurethanes: cytotoxicity and biocompatibility tests. *Proceedings of 17th European Society of Biomaterials Conference*, 11-14 September, 2002, Barcelona, Spain, 1123. Copyright ESB.

E.102 Petrini P, Farè S, Piva A, Tanzi MC. Design, synthesis and properties of polyurethane hydrogels for tissue engineering. *Proceedings of the International Conference Advanced in Biomaterials for Reconstructive Medicine,* 9-14 June, 2002, Capri, Italy, 99-100.

E.103 Farè S, Petrini P, Piva A, Moscatelli M, Tanzi MC. Mechanical properties of polyurethane hydrogels for tissue engineering. *Proceedings of the International Conference Advanced in Biomaterials for Reconstructive Medicine,* 9-14 June, 2002, Capri, Italy, 147-8.

E.104 Tanzi MC, Farè S, Petrini P, Bigi A, Roveri N. Biointegrable 3D composites polyurethane/α-TCP for bone reconstruction. *Proceedings 28th SFB Annual Meeting*, 24-27 April 2002, Tampa, Florida, USA, 75. Copyright 2002 SFB, Vol. XXV.

E.105 Tanzi MC, Farè S, Petrini P, Benvenuti S, Piscitelli E, Tanini A. Cytocompatibility of 3D polyurethane scaffolds for bone regeneration. *Abstracts of 16th European Society of Biomaterials Conference*, 12-14 September, 2001, London, UK, 1.

E.106 Farè S, Fulgini D, Tanzi MC. Investigating the potentiality of smart polymers as biomaterials: shape memory polyurethanes. *Abstracts of 16th European Society of Biomaterials Conference*, 12-14 September, 2001, London, UK, 1007.

E.107 Farè S, Petrini P, Tanzi MC.3D polyurethane scaffolds for bone reconstruction.*Abstracts of EUROMAT 2001 - 7th European Conference on Advanced Materials and Processes*, 10-14 June, 2001, Rimini, Italy. ISBN 88-85298-39-7.

E.108 Farè S, Petrini P, Tanzi MC. HEPITAN: chemico-physical characterization. *Abstracts of the 6th World Biomaterials Congress*, 15 -20 May, 2000, Kamuela, Hawaii, USA. Copyright 2000 SFB.

E.109 Tanzi MC, Farè S, Petrini P. HEPITAN: a new family of heparinizable polymers for blood-contacting devices. *Abstracts of the 6th World Biomaterials Congress*, 15 -20 May, 2000, Kamuela, Hawaii, USA. Copyright 2000 SFB.

E.110 Petrini P, De Ponti S, Farè S, Tanzi MC. Poly-urethane-maleamides for cardio-vascular applications: synthesis and properties. *Abstracts of the 15th European Conference on Biomaterials*, 8-12 September, 1999, Arcachon, Bordeaux, France. Copyright ESB.

E.111 Tanzi MC, Petrini P, Farè S, Visai L, Speziale P, Motta A, Sorcini G. *In vitro* interactions of biomedical polyurethanes with macrophages and bacterial cells. *Abstracts of the 25th Annual Meeting of the Society for Biomaterials*, 28 April-2 May, 1999, Providence, RI, USA. Vol. XXII, Copyright SFB.

E.112 Farè S, Tanzi MC, Mantovani D, Wiget E, Cigada A, Laroche G. Polyurethanes for vascular prostheses: aging under dynamic conditions in physiological-like environments. *Abstracts of the North Sea Biomaterials Meeting 1998*, 15-18 September, 1998, The Hague, The Netherlands.

E.113 Cigada A, Farè S, Mantovani D, Laroche G, Tanzi MC. Aging of poly(ether) and poly(carbonate) urethanes in physiological-like solutions under static and dynamic conditions. *Abstracts of the Intnl. Conference on Advances in Biomaterials and Tissue Engineering*, 14-19 June, 1998, Capri, NA, Italy.

E.114 Tanzi MC, Farè S, Petetta R, Chiesa R, Cigada A. Effect of injection molding and solvent casting on structural stability of poly-urethanes under stress and strong oxidative conditions. *Abstracts of the 24th Annual Meeting of the Society for Biomaterials*, 22-26 April, 1998, San Diego, CA, USA Vol. XXI, Copyright SFB.

E.115 Farè S, Mantovani D, Guidoin R, Tanzi MC, Cigada A, Laroche G. Stabilité chimique *in vitro* des polyuréthannes: effets d'un état de contrainte axiale. *Abstracts of the 1er Symposium International de Biomatériaux Avancés*, 2-5 October, 1997, Montréal, QC, Canada.

E.116 Alfonsi S, Chiesa R, Cigada A, Farè S, Rondelli G, Vicentini B. Surface finishing of titanium dental implants *Abstracts of the13th European Biomaterial Congress*, 4-7 September, 1997, Göteborg, Sweden. Copyright ESB 1997. ISBN 91-630-58111-1.

E.117 Cigada A, Cabrini M, Farè S, Pedeferri P, Alfonsi S. New passivation technique for titanium alloys. *Abstracts of the 23rd Annual Meeting of the Society for Biomaterials*, 30 April-4 May, 1997, New Orleans, Louisiana, USA. Vol. XX, Copyright SFB.

E.118 Tanzi MC, Petrini P, Mojana A, Farè S. Polyether-urethane-maleamides: characterization and properties. *Transaction of the 2nd Symposium on Frontiers in Biomedical Polymers: Biomaterials and Drug Delivery System*, 6-9 April, 1997, Eilat, Israel.

E.119 Cigada A, Farè S, Brossa F, Paracchini L, Ulivi M, Brignola JC. Tribological behaviour of Co-Cr-Mo alloy modified by ion implantation. *Transaction of the 5th World Biomaterials Congress*, 29 May-2 June, 1996, Toronto, Canada, 789. Copyright 1996 SFB.

E.120 Farè S, Brossa F, Paracchini L, Cigada A, Severgnini C, Mattavelli D. Surface treatments to improve tribological behaviour in hip joint prostheses. *Transaction of the 5th World Biomaterials Congress*, 29 May-2 June, 1996, Toronto, Canada, 779. Copyright 1996 SFB.

E.121 Rimondini L, Farè S, Carrassi A, Brambilla E, Brossa F, Consonni C. Early bacterial colonization of titanium oral implant: the effect of wettability and surface roughness. *Transaction of the 5th World Biomaterials Congress*, 29 May-2 June, 1996, Toronto, Canada, 255. Copyright 1996 SFB.

E.122 Rimondini L, Farè S, Bez C, Carrassi A. The pattern of oral microbial colonization on Ti grade I and Ti grade IV. *Transaction of Scanning Microscopy 1996*, 11-16 May, 1996, Bethesda, Washington, USA.

E.123 Brossa F, Cigada A, Farè S, Paracchini L, Chiesa R. Tribological behaviour of Ti6Al4V modified by surface treatments. *Transaction of 12th European Conference on Biomaterials*, 10-13 September, 1995, Porto, Portugal. European Society for Biomaterials, Porto, ISBN 972-9678-0-6.

E.124 Rimondini L. Carrassi A, Brambilla E, Farè S, Brossa F. The effect of surface roughness on microbial colonization. an *in vivo* study of oral implant titanium. *Transaction of 2nd International Meeting and Seminary on Ceramics, Cells and Tissue, Ceramic in oral Surgeries*, 5-6 May, 1995, Faenza, RA, Italy.

E.125 Brossa F, Cigada A, Farè S, Chiesa R, Paracchini L. The influence of surface modifications on the wear of hip joints prostheses. *8th International Conference on Surface Modification Technologies*, 26-28 September, 1994, Nice, France.

PATENTS

F.1 Cigada A, Profaizer M, Del Curto B, Tanzi MC, Farè S, Barelli N. Highly environmentally sustainable composite material. US Patent App. 15/739,322. 2020.

F.2 Tanzi MC, Farè S, Gerges I. Hydrogel of gelatin crosslinked with bisacrylamides of primary or secondary amines comprising e.g. N,N'-methylene-bisacrylamide and N,N'-ethylene-bisacrylamide, useful for

controlled release of drugs, polypeptides and active biomolecules. Patent Number: WO2012164032-A1; IT1406017-B, Politecnico di Milano. Accession Number: DIIDW:2012Q90635.

F.3 Alessandrino A, Calimani R, Farè S, Freddi G, Tanzi MC. Silk fibroin weave structure used for e.g. in vivo cell adhesion and proliferation comprises concentric tubular outer woven fabric sheath with interlaced loops and innercore which is a woven fabric with interlaced loops or is braided. Patent Number: EP2210971-A1; EP2210971-A8, Politecnico di Milano, Stazione Sperimentale per la Seta, Saraflex srl. Accession Number: DIIDW:2010J58333.

Book Editor

G.1 Tanzi MC, Farè S, Candiani G. *Foundations of biomaterials engineering*. 2019, Elsevier Publ. ISBN: 978-008101034-1;978-012809459-4. doi: 10.1016/C2015-0-05967-6.

G.2 Tanzi MC, Farè S. Characterization of polymeric biomaterials. 2017, Elsevier Publ. ISBN: 978-008100737-2;978-008100743-3. doi: 10.1016/C2015-0-01988-8.

Chapters in International Books

G.3 Sbrana FV, Scielzo C, Ribezzi D, Farè S. Read-out in bioprinting. In: Bioprinting: From Multidisciplinary Design to Emerging Opportunities, 2022; 109–135, Elsevier. ISBN: 978-032385430-6, 978-032385431-3. doi: 10.1016/B978-0-323-85430-6.00003-0.

G.4 Ruggeri E, Farè S, De Nardo L, Marelli B. Edible biopolymers for food preservation. In: Athanassiou A. *Sustainable Food Packaging Technology*. 2021; 57-105, WILEY-VCH GmbH. ISBN: 9783527345564. doi.org/10.1002/9783527820078.ch3.

G.5 Santi R, Farè S, Cigada A, Del Curto B. Poly-Paper: cellulosic-filled eco-composite material with innovative properties for packaging. In: Athanassiou A. *Sustainable Food Packaging Technology*. 2021; 263-280, WILEY-VCH GmbH. ISBN: 9783527345564. doi.org/10.1002/9783527820078.ch9.

G.6 Altomare L, Farè S. "Traditional" polymer medical devices: Ex vivo analysis. In: Tanzi MC, Farè S. *Characterization of Polymeric Biomaterials*. 2017; 367-396, Woodhead Publishing. ISBN: 978-0-08-100743-3, doi: 10.1016/B978-0-08-100737-2.00015-7

G.7 De Nardo L, Farè S. Dynamico-mechanical characterization of polymer biomaterials. In: Tanzi MC, Farè S. *Characterization of Polymeric Biomaterials*. 2017; 367-396, Woodhead Publishing. ISBN: 978-0-08-100743-3, doi: 10.1016/B978-0-08-100737-2.00015-7

G.8 Altomare L, Farè S, Tanzi MC. Bio-Instructive Scaffolds for Muscle Regeneration: NonCrosslinked Polymers. In: Brown JL, Kumbar SG, Banik BL. *Bio-Instructive Scaffolds for Musculoskeletal Tissue Engineering and Regenerative Medicine*. 2016; 161-186, 24-28 Oval Road, London NW1 7dX, England:Elsevier Inc. ISBN: 9780128033999, doi: 10.1016/B978-0-12-803394-4.00007-0

G.9 Tanzi MC, De Nardo L, Bertoldi S, Farè S. Shape-memory polyurethane cellular solids for minimally invasive surgical procedures. In: Yahia LH, Shape Memory Polymers for Biomedical Applications. 2015; 133-156, Woodhead Publishing. ISBN: 978-0-85709-698-2, doi: 10.1016/B978-0-85709-698-2.00007-6

National books

H.1 Tanzi MC, Bianchi AM, Farè S, Mantero S, Raimondi MT, Visai L. Approccio integrato per la medicina rigenerativa. Gruppo Nazionale di Bioingegneria, Patron Editore, Bologna, Italy, 2013. ISBN: 9788855532419.

Chapters in National Books

H.2 Petrini P, Farè S. Sterilizzazione e degradazione. In: *Fondamenti di Bioingegneria Chimica: non solo biomateriali*, MC Tanzi, Pitagora Editrice, Bologna, Italy, 2006, 117-138. ISBN: 88-371-1569-5

H.3 Farè S. Tecnologie di lavorazione. In: *Fondamenti di Bioingegneria Chimica: non solo biomateriali*, MC Tanzi, Pitagora Editrice, Bologna, Italy, 2006, 49-70. ISBN: 88-371-1569-5

H.4 Tanzi MC, Farè S, Petrini P. L'evoluzione dei biomateriali polimerici: da materiali "inerti" a materiali "a interazione programmata. In: *Biomateriali: dagli impianti protesici alla medicina rigenerativa*, a cura di Cigada A, Contro R, Di Bello C, Tanzi MC, Gruppo Nazionale di Bioingegneria, Patron Editore, Bologna, Italy, 2005, 24:9-26.ISBN: 88-555-2836-X.

H.5 Tanzi MC, Farè S, Petrini P. Preparazione di scaffold sintetici. In: *Ingegneria dei Tessuti Biologici*, a cura di Cancedda R and Pietrabissa R, Gruppo Nazionale di Bioingegneria, Patron Editore, Bologna, Italy, 2002, 21:203-218.

Milan, April 16th 2024

Signature

Silvia Farè