## Giuseppe Maria de Peppo, BSc, MSc, PhD

**Birth Date and Place:** 15/10/1981, Lucera (FG), ITALY

**USA Citizen, Italian Citizen**

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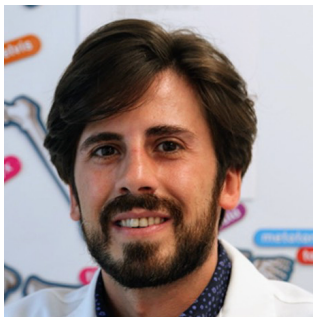

**Personal Statement**

I am an Industry Associate Professor of Biotechnology at the Department of Chemical and Biomolecular Engineering at NYU Tandon School of Engineering. Recently, I have been developing next generation sensing devices for the detection and monitoring of different human health hazards. engineered tissue grafts and tissue replacement products, developed and tested implants and biomaterials, designed and validated bioreactor systems, and manufactured stem cells for human therapies. During over 15 years of research and academic experience, I have had the opportunity to teach and mentor numerous undergraduate and graduate students and supervise several PhD and postdoctoral fellows.

**A. Education**

2007-2011. International PhD in Tissue Engineering - University of Gothenburg/Université Paris Diderot Paris 7 (BestPrize)
Thesis title: *Human Embryonic Stem Cells for Bone Engineering Applications*

2003-2006. Master of Science in Medical Biotechnology - Bicocca University/Politecnico di Milano (full marks)
Thesis title: *Enzymatic Catalysis for the Synthesis of New Materials as Innovative Biomaterials*

2000-2003. Bachelor of Science in Biotechnology - La Sapienza University (full marks cum laude)
Thesis title: *Improving Gene Silencing for Biotech Applications in Fungi, Plants, and Animals*

**B. Continuing Professional Development**

2020. Leadership Essentials. The FosterHicks Model – NYSCF Research Institute
2018. Nanofabrication Workshop: An Introduction to Utilizing Nanotechnology – CUNY Advanced Science Research Center
2017. Using Creative Problem Solving - National Chiao Tung University (online course)
2017. Imaging and Surface Science Workshop - CUNY Advanced Science Research Center
2017. Management and Leadership: Leading a Team - The Open University (online course)
2017. Histology: Using Microscopy to Study Anatomy and Identify Disease - The Open University (online course)
2017. Discovering Science: Science Writing - University of Leeds (online course)
2017. Communicating Complex Information - Purdue University (online course)
2017. Bioprinting: 3D Printing Body Parts - University of Wollongong (online course)
2016. AutoCAD Intensive Course (level 3) - Technical Institute of America
2015. AutoCAD Intensive Course (level 1) - Technical Institute of America
2014. COMSOL Multiphysics Intensive Course - Microtek
2011. Supervision in Postgraduate Programs - University of Gothenburg
2011. Ideas Evaluation and Feasibility - University of Gothenburg
2011. Biomedicine for Business Creation and Entrepreneurs - University of Gothenburg

2010. Biomedical Entrepreneurship in Theory and Practice - University of Gothenburg
2010. Career Possibilities in Industry - BioSum School, Gothenburg, SE
2009. Venture Creation and Entrepreneurship Course - Bioscience Business School, Gothenburg, SE
2009. Stem Cells: a Pathway Through the Maze - Oxford University, Oxford, UK
2009. Biomaterials: from Idea to Market - BioSum School, Gothenburg, SE
2007. SAP Intensive Course - Training Management Service, Milan, IT
2006. International School of Bioinformatics - Centro de Investigaciones Principe Felipe, Valencia, SP

**C. Positions**
2024-present. Associate Industry Professor, New York University, NYC, USA
2023-2024. Research Assistant Professor, Cell Biology, SUNY, NYC, USA
2021-2024. Director of Internal Research, Mirimus Inc, NYC, USA
2019-2024. Visiting Research Scholar, New York University, NYC, USA
2016-2021. Senior Principal Investigator, The New York Stem Cell Foundation, NYC, USA
2014-2016. Principal Investigator, The New York Stem Cell Foundation, NYC, USA
2013-2014. Research Fellow, The New York Stem Cell Foundation, NYC, USA
2011-2013. Postdoctoral Research Fellow, The New York Stem Cell Foundation, NYC, USA
2013-2014. Visiting Scientist, Stem Cell Institute at Albert Einstein Medical College, NYC, USA
2007-2011. PhD Student, University of Gothenburg, Gothenburg, SE
2009-2010. Visiting Fellow, Laboratoire de Recherches Orthopédiques, Université Paris Diderot, Paris, FR

**D. Awards and Honors**
2023. International Award “Pugliesi nel Mondo”, IT
2023. Rotary International, Puglia and Basilicata District, IT
2019. Merit Award, The City of Lucera, IT
2016. Wallenberg Academy Fellow Nominee, University of Uppsala, SE
2015. The Ralph and Ricky Lauren Family Foundation Senior Investigator Award, USA
2012. Argos Hippium Award for outstanding professional achievements abroad, IT
2011. Postdoctoral Research Fellowship Award, The New York Stem Cell Foundation, USA
2011. BestPrize Award for the best doctoral thesis of 2011, University of Gothenburg, SE
2007. Marie Curie Fellow Association (MCFA) Award: mobility research training, EU

**E. Skills**
Cell Culture: bacterial cells, mammalian cells (primary, ESC, iPSC), cancer cell lines, 2D and 3D cultures (with or without biomaterials), mono- and co-cultures, static and dynamic (bioreactors) cultures, GMP-compliant cultures, transfection, transformation, cloning.
Animal Studies: mouse and rat models (immunocompetent and immunocompromised animals).
Molecular Biology: PCR, qPCR, ELISA, RNAseq**,** fluorescence and colorimetric assays, *in vitro* functional assays, spectrophotometry, immunohistochemistry, flow cytometry, gel electrophoresis, blotting, RNA and DNA isolation, plasmid isolation, protein expression and purification, bioconjugation, probe design and engineering.
Histology: tissue fixation, tissue embedding, microtomy, cryosectioning, immunohistochemistry, immunofluorescence, staining.
Imaging: fluorescence microscopy, confocal microscopy, live cell imaging, bioluminescence, scanning electron microscopy, atomic force microscopy, thermochemical scanning probe lithography, magnetic resonance imaging.
Material Fabrication: spin coating, sputter coating and deposition, 3D printing, milling, casting, polishing, thermochemical scanning probe lithography, chemical deposition.
Material Characterization: X-ray diffraction, X-ray photoelectron spectroscopy, scanning electron microscopy, atomic force microscopy, Fourier-transform infrared spectroscopy, Raman spectroscopy, UV-visible spectroscopy, surface plasmon

resonance, differential scanning calorimetry, thermogravimetric analysis, time-of-flight secondary ion mass spectroscopy, profilometry.
Electrochemistry: impedance spectroscopy, square wave voltammetry, cyclic voltammetry.
Computer skills: familiarity working both in Microsoft and Macintosh environments**,** deep knowledge of Microsoft Office and Keynote, expertise in searching the web**,** familiarity with major bioinformatic software and database, COMSOL Multiphysics, AutoCAD**,** ImageJ, Adobe Illustrator, Photoshop, web design.

**F. Publications**

PhD Thesis

Human Embryonic Stem Cells for Bone Engineering Applications. 2011.
https://gupea.ub.gu.se/bitstream/2077/25301/1/gupea_2077_25301_1.pdf

Peer-reviewed Original Articles

Patera A, Udumulla T, Tabassum N, Brudermann S, Shohid S, ***de Peppo GM****. Ad-hoc* Designed Regenerative DNA Probes for the Detection of Bacterial Infections and Contaminations using Diverse Transducing Systems. *In preparation*.

Wriht A, Nasralla H, Deshmukh R, Jamalzadeh M, Hannigan M, Patera A, Li Y, Manzo-Perez M, Parashar N, Huang Z, Udumulla T, Chen W, de Forni D, Weck M, ***de Peppo GM***, Riedo E, Shahrjerdi D. Nanoscale-localized multiplexed biological activation of field effect transistors for biosensing applications. Nanoscale, 2024 Oct 31;16(42):19620-19632.

Zanut A, Li R, Deng R, Liu X, Rejhon M, Chen W, Weck M, ***de Peppo GM***, Riedo E. A polymer canvas with the stiffness of the bone matrix to study and control mesenchymal stem cell response. Adv Healthc Mater. 2022 Dec 24:e2201503.

Gultian K, Gandhi R, Sarin K, Sladkova-Faure M, Zimmer M, ***de Peppo GM***, Vega SL. Human induced mesenchymal stem cells display increased sensitivity to matrix stiffness. Scientific Reports. 2022 May 19;12(1):8483.

Liu X, Zanut A, Sladkova-Faure M, Xie L, Weck M, Zhenga X, Riedo E, ***de Peppo GM***. Cost and time effective lithography of reusable millimeter size bone tissue replicas with sub-15 nm feature size on a biocompatible polymer. Advanced Functional Materials. 2021 May 10; 31(19): 2008662.

Sladkova M, Palmer M, López A, Öhman C, Wang H, Engqvist H, ***de Peppo GM***. An Engineered Biomimetic Bone Platform for Advanced Testing of Prosthetic Implants. Scientific Reports. 2020 Dec 17;10(1):22154.

Tam E, McGrath M, Sladkova M, AlManaie A, Alostaad A, ***de Peppo GM***. Hypothermic and Cryogenic Preservation of Tissue-engineered Human Bone. Annals of the NY Academy of Sciences. 2020 Jan; 1460(1): 77–87.

McGrath M, Tam E, Sladkova M, AlManaie A, Zimmer M, ***de Peppo GM***. GMP-compatible and Xeno-free Cultivation of Mesenchymal Progenitors Derived from Human Induced Pluripotent Stem Cells. Stem Cell Research and Therapy. 2019 Jan 11;10(1):11.

****de Peppo GM***, *Bigdeli N, Karlsson C, Lennerås M, Strehl R, Hyllner J, Lindahl A. Upregulation of adhesion molecules sustains matrix-free growth of human embryonic stem cells. The Open Stem Cell Journal, 5:14-30 (2018).

Sladkova M, Cheng J, Palmer M, Chen S, Lin C, Xia W, Yu YE, Zhou B, Engqvist H, ***de Peppo GM***. Comparison of Decellularized Cow and Human Bone for Engineering Bone Grafts with human iPS cells. Tissue Engineering Part A. 2019 Feb;25(3-4):288-301.

Sladkova M, Alawadhi R, Jaragh Alhaddad R, Esmael A, Alansari S, Saad M, Mulla Yousef J, Alqaoud L, ***de Peppo GM***. Segmental Additive Tissue Engineering. Scientific Reports, 8(1):10895 (2018).

Ingrassia D, Sladkova M, Palmer M, Xia W, Engqvist H, ***de Peppo GM***. Stem Cell-mediated Functionalization of Titanium Implants. Journal of Materials Science: Materials in Medicine, 28(9):133 (2017).

Sladkova M, Palmer M, Öhman C, Cheng J, Alansari S, Saad M, Engqvist H and ***de Peppo GM***. Engineering Human Bone Grafts with New Macroporous Calcium Phosphate Cement Scaffolds. J Tissue Eng Regen Med. 2018 Mar;12(3):715-726.

Sladkova M, Palmer M, Öhman C, Jaragh Alhaddad R, Esmael A, Engqvist H, ***de Peppo GM***. Fabrication of Macroporous Cement Scaffolds using PEG particles: In Vitro Evaluation with Induced Pluripotent Stem Cell-derived Mesenchymal Progenitors. MSEC, 69:640-652 (2016).

***de Peppo GM***, Agheli H, Karlsson C, Ekström K, Brisby H, Lennerås M, Gustafsson S, Sjövall P, Johansson A, Olsson E, Lausmaa J, Thomsen P, Petronis S. Osteogenic Response of Human Mesenchymal Stem Cells to Well-defined Nanoscale Topography *in vitro*. Int J Nanomedicine, 9:2499-515 (2014).

***de Peppo GM***, Marcos Campos I, Kahler JD, Alsalman D, Shang L, Vunjak Novakovic G, Marolt D. Engineering Bone Tissue Substitutes from Human Induced Pluripotent Stem Cells. Proc Natl Acad Sci U S A, 110(21):8680-5 (2013).

***de Peppo GM***, Sladkova M, Sjovall P, Palmquist A, Thomsen P, Hyllner J, Petite H, Karlsson C. Human Embryonic Stem Cell-derived Mesodermal Progenitors Display Substantially Increased Tissue Formation Compared to Human Mesenchymal Stem Cells under Dynamic Culture Conditions in a Packed bed/column Bioreactor. Tissue Eng Part A, 19(1-2):175-87 (2013).

***de Peppo GM***, Palmquist A, Lennerås M, Hyllner J. Snis A, Thomsen P, Karlsson C. Free-form Fabricated commercially-pure Ti and Ti6Al4V Porous Scaffolds Support the Growth of Human Embryonic Stem Cell-derived Mesodermal Progenitors. ScientificWorldJournal, 2012:646417 (2012).

***de Peppo GM***, Bigdeli N, Lennerås M, Sjövall P, Lindahl A, Hyllner J, Karlsson C. Superior Osteogenic Capacity of Human Embryonic Stem Cells Adapted to Matrix-Free Growth Compared to Human Mesenchymal Stem Cells. Tissue Eng Part A, 16(11):3427-40 (2010).

***de Peppo GM***, Sjövall P, Lennerås M, Strehl R, Hyllner J, Thomsen P, Karlsson C. Osteogenic Potential of Human Mesenchymal Stem Cells and Human Embryonic-derived Mesodermal Progenitors: a Tissue Engineering Perspective. Tissue Eng Part A, 16(11):3413-26 (2010).

***de Peppo GM***, Svensson S, Lennerås M, Synnergren J, Stenberg J, Strehl R, Hyllner J, Thomsen P, Karlsson C. Human Embryonic Mesodermal Progenitors Resemble Human Mesenchymal Stem Cells and Display High Potential for Tissue Engineering Applications. Tissue Eng Part A, 16(7):2161-82 (2010).

Dohan Ehrenfest DM, ***de Peppo GM***, Doglioli P, Sammartino G. Slow Release of Growth Factors and Thrombospondin-1 in Choukroun's Platelet-rich Fibrin (PRF): a Gold Standard to Achieve for all Surgical Platelet Concentrates Technologies. Growth Factors, 27(1):63-9 (2009).

Dohan Ehrenfest DM, Diss A, Doglioli P, ***de Peppo GM***, Hippolyte MP, Del Corso M, Charrier JB. Choukroun's PRF (Platelet Rich Fibrin) Stimulates in vitro Proliferation and Differentiation of Human Oral Bone Mesenchymal Stem Cell in a Dose-dependent Way. Arch Oral Biol, 55(3):185-94 (2010).

<u>Peer-reviewed Review Articles</u>

Albisetti E, Calo A, Zanut A, Zhang, ***de Peppo GM***, Riedo E. Thermal Scanning Probe Lithography. Nat Rev Methods Primers 2, 32 (2022).

Sladkova M, ***de Peppo GM***. Bioreactor Systems for Human Bone Tissue Engineering. Processes, 2(2):494-525 (2014).

***de Peppo GM***, Marolt M. Make no bones about it!: Cells could soon be programmed to grow replacement bones? Expert Opin Biol Ther, 14(1):1-5 (2014).

***de Peppo GM***, Marolt M. Modulating the Biophysical Culture Environment to Enhance Osteogenic Differentiation and Maturation of Pluripotent Stem Cell-derived Mesenchymal Progenitors. Stem Cell Res Ther, 4(5):106 (2013).

***de Peppo GM***, Thomsen P, Karlsson C, Strehl R, Lindahl A, Hyllner J. Human Progenitor Cells for Bone Engineering Applications. Current Molecular Medicine, 13(5):723-34 (2013).

***de Peppo GM***, Marolt M. State of the Art in Stem Cell Research: Human Embryonic Stem Cells, Induced Pluripotent Stem Cells and Transdifferentiation. Journal of Blood Transfusion. Article ID 317632 (2012).

Conference Reports

Marshall C, Hua H, Shang L, Ding BS, Zito G, ***de Peppo GM***, Wang GK, Douvaras P, Sproul AA, Paull D, Fossati V, Nestor MW, McKeon D, Smith KA, Solomon SL. The sixth annual translational stem cell research conference of the New York Stem Cell Foundation. Ann N Y Acad Sci, 1255:16-29 (2012).

Book Chapters

Saleh F, Mondeh-Lowor R, ***de Peppo GM***. Xeno-free Cultivation of Human Induced Pluripotent Stem Cells for Clinical Applications. INUDUCED PLURIPOTENT STEM CELLS – NOVEL CONCEPTS. Elsevier (2020).

***de Peppo GM***. GMP-compatible, Xeno-free Culture of Human Induced Mesenchymal Stem Cells. METHODS IN MOLECULAR BIOLOGY. SpringerNature (2020).

***de Peppo GM***, Omar O, Thomsen P. Biomaterials for Cranio-maxillo-facial Bone Engineering. TISSUE ENGINEERING IN ORAL AND MAXILLOFACIAL SURGERY. Springer (2019).

***de Peppo GM***, Vunjak-Novakovic G, Marolt D. Cultivation of Human Bone-like Tissue from Pluripotent Stem Cell-derived Osteogenic Progenitors in Perfusion Bioreactors, METHODS IN MOLECULAR BIOLOGY. SPRINGER PROTOCOLS (2014).

***de Peppo GM***, Karlsson C. Human Embryonic Stem Cell-derived Mesodermal Progenitors for Bone Engineering, STEM CELLS AND CANCER STEM CELLS. Springer (2012).

**G. Patents**

- Tissue grafts and methods of making and using the same. ***de Peppo GM***.
- Customized Hybrid Bone-implant Grafts. ***de Peppo GM*** and Sladkova M.
- Perfusion Bioreactor. ***de Peppo GM***.
- Surface Functionalized Implants and Method of Generating the Same. ***de Peppo GM***, Engqvist H, Sladkova M.
- Biomimetic Tissue and Method of Use Thereof. ***de Peppo GM*** and Riedo E.
- Molecular REProbes and Methods of Making and Using the Same. ***de Peppo GM***.

**H. Peer-reviewed Conference Contributions**

BMES Conference, Baltimore, USA (2024)

Patera A, Udumulla T, Brudermann S, Tabassum N, Premsrirut P, ***de Peppo GM***

Ad-hoc Designed DNA Probes for Detection of Bacterial Infections and Contaminations using Diverse Transducing Systems. (poster)

MRS Conference, Honolulu, USA (2022)
Fabricating mm-size bone tissue replicas with tSPL (oral)
Liu X, Zanut A, Sladkova-Faure M, Xie L, Weck M, Zhenga X, Riedo E, ***de Peppo GM***.

NYSCF Annual Translational Stem Cell Research Conference, New York, NY (2020)
Sladkova-Faure M, Fothergill-Robinson J, Rutherford R, Zimmer M, ***de Peppo GM***
Xeno-free Derivation of Induced Mesenchymal Stem Cells for Personalized Therapeutic Applications. (poster)

BMES Conference, Philadephia, USA (2019)
Differences in Mechanosensing Between Human MSCs and iPSC-derived MSCs. (oral)
Benmassaoud M, Driscoll K, ***de Peppo GM***, Vega SL

ISSCR Conference, Los Angeles, USA (2019)
McGrath M, Tam E, Sladkova M, AlManaie A, Zimmer M, ***de Peppo GM***
Towards clinical-grade mesenchymal progenitors from human induced pluripotent stem cells. (poster)

TERMIS World Congress, Kyoto, JP (2018)
Sladkova M, Alawadhi R, Jaragh Alhaddad R, Esmael A, Alansari S, Saad M, Mulla Yousef J, Alqaoud L, ***de Peppo GM***
Segmental Additive Tissue Engineering: towards a tissue engineering approach to segmental bone defect therapy. (poster)

NYSCF Annual Translational Stem Cell Research Conference, New York, NY (2017)
Ingrassia D, Sladkova M, Palmer M, Xia W, Engqvist H, ***de Peppo GM***
Stem Cell-mediated Functionalization of Titanium Implants. (poster)

TERMIS-AM, San Diego, CA (2016)
Sladkova M, Cheng J, Lin C, Palmer M, Chen S, Yu YE, Engqvist H, ***de Peppo GM***
Bone Engineering Potential of Cow and Human Derived Decellularized Bone Scaffolds. (oral)

NYSCF Tenth Annual Translational Stem Cell Research Conference, New York, NY (2015)
Cheng J, Sladkova M, Lin C, Palmer M, Ohman C, Eric YY, Engqvist H, ***de Peppo GM***
Human and Cow Bone-derived Scaffolds for Tissue Engineering Applications. (poster 1)

Sladkova M, Wang H, Esmael A, Al-Ansari S, Saad M, Palmer M, Öhman C, Engqvist H, ***de Peppo GM***
Development of a platform for testing implants materials *in vitro*. (poster 2)

TERMIS World Congress, Boston, MA (2015)
Sladkova M, Palmer M, Öhman C, Jaragh Alhaddad R, Esmael A, Engqvist H, ***de Peppo GM***
Development of Macroporous Cement Scaffolds for Bone Engineering Applications Using iPSC. (poster)

ISSCR Conference, Stockholm, SE (2015)
Sladkova M, Palmer M, Öhman C, Jaragh Alhaddad R, Esmael A, Cheng J, Engqvist H, ***de Peppo GM***
Osteogenic Response of iPSC-derived Mesenchymal Cells to Macroporous Calcium Phosphate Scaffolds. (poster)

Tissue Engineering & Bioprinting: Research to Commercialization Conference, Boston, MA (2015)
Jaragh R, Sladkova M, A Esmael, ***de Peppo GM***
Controlled Design of a Perfusion Bioreactor for Segmental Additive Bone Engineering. (poster)

ISSCR Conference, Vancouver, CA, (2014)
Sladkova M, Lin C, ***de Peppo GM***
Vascularization of Human Induced Pluripotent Stem Cell-engineered Bone Grafts. (poster 1)

Sladkova M, Engqvist H, ***de Peppo GM***
Porous Bone Cement Scaffolds for Engineering Bone Grafts with Human Induced Pluripotent Stem Cells. (poster 2)

Biomedical Engineering Society, Seattle, WA (2013)
Marolt D, ***de Peppo GM***, Campos IM, Kahler D, Alsalman D, Shang L, Vunjak Novakovic G
Engineering Stable Bone Tissue Substitutes from Human Pluripotent Stem Cells. (oral)

NYSCF Eighth Annual Translational Stem Cell Research Conference, New York, NY (2013)
Lin C, Sladkova M, ***de Peppo GM***
Vascularization of iPSC-engineered Bone for Enhanced Repair of Skeletal Defects

Termis, Istanbul, TR (2013)
***de Peppo GM***, Campos IM, Kahler D, Alsalman D, Shang L, Vunjak Novakovic G, Marolt D
Engineering Bone Grafts from Human Induced Pluripotent Stem Cells. (oral)

ISSCR Conference, Boston, MA (2013)
***de Peppo GM***, Campos IM, Kahler D, Alsalman D, Shang L, Vunjak Novakovic G, Marolt D
Bone Engineering with Human Induced Pluripotent Stem Cells. (poster)

Orthopedic Research Society, San Antonio, TX (2013)
***de Peppo GM,*** Campos IM, Kahler D, Alsalman D, Shang L, Vunjak Novakovic G, Marolt D
Engineering viable bone grafts from human induced pluripotent stem cells in perfusion bioreactors. (poster)

Termis, Vienna, AS (2012)
Thomsen P, Omar O, ***de Peppo GM***, Ekström K
The Role of Cell-cell communication for the Transition from Inflammation to Bone Regeneration. (oral)

**I. Teaching Experience**

Graduate Level Course

- 2023 (Fall Term). Lecture in Graduate Level Course *Nanoscale Properties and Characterization of Nanomaterials* (Select Topics Chem & Bio Engr II; enrollment: 20), Department of Chemical and Biomolecular Engineering, Tandon School of Engineering, New York University, NYC, USA
- 2021 (Spring Term). Lecture in *M.A. in Biotechnology* (BIOLGU4305; enrollment: 40-50), Department of Biological Sciences, Columbia University, NYC, USA
- 2020 (Spring Term). Lecture in *M.A. in Biotechnology* (BIOLGU4305; enrollment: 40-50), Department of Biological Sciences, Columbia University, NYC, USA
- 2020 (Fall Term). Lecture in Medical School (Level III, IV, V) Course *Stem Cells and Regenerative Medicine* (14111743; enrollment: 40) School of Medicine, Militar Nueva Granada University, Bogotá, Colombia
- 2018 (Spring Term). Lecture in *M.A. in Biotechnology* (BIOLGU4305; enrollment: 40-50), Department of Biological Sciences, Columbia University, NYC, USA
- 2017. Lecture in Graduate Level Course *Micro-Nano Technology: Mechanics, Materials and Manufacturing* (ME 56300; enrollment: 20-45), Department of Mechanical Engineering, The City College of New York, NYC, USA
- 2017 (Spring Term). Lecture in *M.A. in Biotechnology* (BIOLGU4305; enrollment: 40-50), Department of Biological Sciences, Columbia University, NYC, USA

- 2016 (Spring Term). Lecture in *M.A. in Biotechnology* (BIOLGU4305; enrollment: 40-50), Department of Biological Sciences, Columbia University, NYC, USA
- 2015 (Fall Term). Lecture in Graduate Level Course *Biomaterials II* (1KB264; enrollment: 20), Department of Materials Science and Engineering, Uppsala University, Uppsala, SE
- 2013 (Fall Term). Lecture in Graduate Level Course *Biological and Pharmaceutical Biotechnology* (enrollment: 30-40), St. John's University, NYC, USA

K-12 Level Course

- 2024. After School STEM Mentorship Program (10 classes), the New York Academy of Science, NYC, USA
- 2014. Lecture at Promise Academy 1, NYC, USA
- 2014. Lecture at Stuyvesant High School, NYC, USA
- 2014. Lecture at The Equity Project Charter High School, NYC, USA
- 2014. Lecture at Liceo Classico Bonghi - Rosmini, Lucera, IT
- 2013. Lecture at The Spence School, NYC, USA

**J. Invited Seminars**

2021. Seminar Series, Center for Skeletal and Craniofacial Biology, New York University, NYC, USA
2018. 7th Annual Musculoskeletal Repair and Regeneration Symposium, Albert Einstein College of Medicine, NYC, USA
2018. HSS Research Institute, Hospital for Special Surgery, NYC, USA
2017. HSS Research Institute, Hospital for Special Surgery, NYC, USA
2016. Eleventh Annual Translational Stem Cell Research Conference, Rockefeller University, NYC, USA
2015. Advanced Science Research Center, College University of New York, NYC, USA
2015. Biomaterial Research Center Annual Day, Gothenburg, SE
2014. Knickerbocker Club, NYC, USA
2013. Materials for Tomorrow Conference, Chalmers University of Technology, Gothenburg, SE
2013. 6th BIOMATCELL Symposium, Bohuslän, SE
2011. Scandinavian Society for Biomaterials, Fiskebackskil, SE
2010. St. Jude Medical AB, Jarfalla, SE

**K. Mentorship Experience (2011-2024)**

Research Chemist, Thanuka Udumulla, Mirimus Inc (supervisor)
Research Associate. Stephanie Brudermann, Mirimus Inc (supervisor)
Research Associate. Nusrat Tabassum, Mirimus Inc (supervisor)
Research Associate. Syema Shohid, Mirimus Inc (supervisor)
Doctoral Candidate. Andrew Patera, SUNY (supervisor)
Doctoral Candidate. Hashem Nasralla, New York University (co-advisor)
Postdoctoral Fellow. Alex Wright, New York University (co-advisor)
Postdoctoral Fellow. Rahul Deshmukh, New York University (co-advisor)
Undergraduate Student. Ryan Rutherford, The Ohio State University (supervisor)
Doctoral Candidate. Xiangyu Liu, New York University (co-advisor)
Undergraduate Student. Julie Fothergill-Robinson, McMaster University (supervisor)
Undergraduate Student. Kristel Velez, The City College of New York (co-supervisor)
Undergraduate Student. Anaam Alostaad, University of Leeds (supervisor)
Undergraduate Student. Athbah N A E A Almanaei, Kuwait University (supervisor)
Undergraduate Student, Madison McGrath, Johns Hopkins University (supervisor)
Doctoral Candidate. Michael Palmer, University of Uppsala (co-advisor)
Undergraduate Student. Afnan Alsayegh, Kuwait University (supervisor)
Undergraduate Student. Bodoor Almulla, American University of the Middle East (supervisor)
Undergraduate Student. Shahad Awadh, American University of Kuwait (supervisor)

Undergraduate Student. Mohammad Shashtari, Kuwait University (supervisor)
Undergraduate Student. Talal Alradhwan, American University of the Middle East (supervisor)
Undergraduate Student. Najeebah Almahmeed, Kuwait University (supervisor)
Undergraduate Researcher. William Sullivan, Hunter College (co-supervisor)
Undergraduate Researcher. Robert Ho, Hunter College (co-supervisor)
Adjunct Lecturer/Laboratory Assistant. Edmund Tam, Hunter College (supervisor)
Undergraduate Student. Jenan Yahya MullaYousef, American University of the Middle East (supervisor)
Undergraduate Student. Lulwa M. Alqaoud, American University of the Middle East (supervisor)
Master Student. Deanna Ingrassia, St. John's University (supervisor)
Master Student. Onkar M Khanapure, New York University (supervisor)
Undergraduate Student. Hanbin Wang, Columbia University (supervisor)
Master Student. Jiayi Cheng, St. John's University (supervisor)
Undergraduate Student. Munira Jassim Saad, American University of the Middle East (supervisor)
Undergraduate Student. Shoug Alansari, American University of the Middle East (supervisor)
Undergraduate Student. Asmaa Esmael, American University of the Middle East (supervisor)
Doctoral Student. Xiaoqin Wang, University of Gothenburg (co-advisor)
Undergraduate Student. Rawan Jaragh Alhaddad, American University of the Middle East (supervisor)
Undergraduate Student. Rawan Alawhadi, American University of the Middle East (supervisor)
Postdoctoral Fellow. Martina Sladkowa, The New York Stem Cell Foundation (supervisor)
Master Student. Charles Lin, St. John's University (supervisor)
Undergraduate Student. Dana Alsalman, American University of the Middle East (co-supervisor)
Master Student. Shima Parsafar, University of Gothenburg (co-supervisor)

**L. Organizational Activities (conference, workshops, poster session, *et cetera*)**
2020. Chair at the Mirimus, Inc Retreat, New York City, USA
2020. Chair at the NYSCF Innovators Retreat, New York City, USA
2019. Chair at the NYSCF Innovators Retreat, Montauk, USA
2016. Bio|Nano|Med Initiative at the Advanced Science Research Center Initiative at CUNY, NYC, USA
2015. STINT Workshop at the New York Stem Cell Research Institute, NYC, USA
2009. Poster session at Chalmers Initiative Workshop: At the Interface between Life and Matter, Gothenburg, SE

**M. Professional Memberships**
2024-2025. Member of the New York Academy of Science (NYAS).
2017-present. Member of the Editorial Board, Annals of Stem Cell Research and Therapy
2017-present. Member of the Editorial Board, Annals of Stem Cell and Regenerative Medicine
2016-present. Honorary Member, International Association "Pugliesi nel Mondo"
2016. Member of the Scientific Advisory Committee, TERMIS-EU Conference
2016-present. Member of the Editorial Board, International Journal of Stem Cell Research and Therapy
2015-present. Member, Initiative on Women in Science and Engineering (IWISE)
2010-2015. Associate member, The International Society for Stem Cell Research (ISSCR)
2010-2012. Member, The International Cellular Medicine Society (ICMS)
2013-2014. Active Member, Orthopedic Research Society (ORS)

**N. Reviewer**
Journals
Acta Biomaterialia, Biochemical Engineering Journal, Biomaterials, Current Pharmaceutical Biotechnology, International Journal of Molecular Sciences, Journal of Clinical Medicine, Journal of Materials Chemistry B, JSM Regenerative Medicine, Materials, Processes, Stem Cells International, Tissue Engineering, Small

Grants
2023. Albert Einstein Society (USA)
2021. Botnar Research Centre for Child Health (BRCCH), University of Basel & ETH Zurich (Switzerland)
2020. Albert Einstein Society (USA)
2018. National Science Center (Poland)

**O. Public Appearance/Outreach (magazines, newspapers, television, podcasts, webinars, *et cetera*)**
2022. Research Expo, NYU Tandon School of Engineering
2020. Research Update Webinar: Engineering Personalized Bone Implants, The NYSCF Research Institute
2020. Sharing TV
2020. Nanotech NYC
2019. Studio9tv
2019. Panelist at the NYSCF Research Institute. Stem Cells in the City: The Future of Regenerative Medicine
2018. RegMedNet
2018. Atlas of Science. Better Implants with Stem Cells
2017. National Broadcasting Company (NBC) News
2017. Panelist at CUNY Graduate Center. City of Science: Can Nanotechnology Revolutionize Medicine?
2015. Bloomberg Business
2015. Rai 1, "Porta a Porta"
2015. NYSCF Webinar Series. Stem Cells, Bone Engineering and the Future of Injury Repair
2014. Naturejobs: Spotlight on Stem Cell Research
2013. Rai Sport 1, "Galeno"
2013. Slovene Television
2013. The Verge
2013. The Wall Street Journal
2012. La Gazzetta del Mezzogiorno
2012. Crain's New York Business
2011. Radio Podcast Interview at Rensselaer Polytechnic Institute. STEM CELLS: Challenges and Promises
2011. INNOVATION & FORSKNING

**P. Computer Skills**
- Familiarity working both in Microsoft Windows and Machintosh OsX environments
- Deep knowledge of Microsoft Office (especially Excel, PowerPoint, Word)
- Expertise in searching the Web
- Major Bioinformatic Software and Database
- Major Engineering Software (Comsol Muliphysics, AutoCAD)
- Image Editing Software (ImageJ, Adobe Illustrator, Photoshop)

**Q. Language**
- Italian (mother tongue)
- English (advanced knowledge)
- Spanish (good knowledge)
- French (good knowledge)

*References available on request.*