Curriculum Vitae of Roberto Pisano

Work address

Website:http://www.disat.polito.it/research/research_groups/musychen/molecular_engineering_lab_mole

Current position Full Professor of Chemical Engineerig at Politecnico di Torino

Director of the International Centre for Innovation in Pharmaceutical Manufacturing and Medicines (ITHACAM)

Education

April 2009	PhD in Chemical Engineering Department of Material Science and Chemical Engineering, Politecnico di Torino (Italy)
December 2005	Master of Science in Chemical Engineering Faculty of Engineering I, Politecnico di Torino (Italy) Graduated with Highest Honors (summa cum laude)

Academic Appointments

2019 – present	Full Professor Department of Applied Science and Technology, Politecnico di Torino (Italy)
2014 – 2019	Associate Professor Department of Applied Science and Technology, Politecnico di Torino (Italy)
2011 - 2014	Assistant Professor Department of Applied Science and Technology, Politecnico di Torino (Italy)
2009 - 2011	Post-doctoral Fellow Department of Material Science and Chemical Engineering, Politecnico di Torino (Italy)

Other Appointments

Sept 2016	Visiting Researcher Department of Chemical Engineering, Massachusetts Institute of Technology (Cambridge, USA)
Jul 2008 – Dec 2008	Visiting Scholar

Centre de Ressources Technologiques – Institut Technique Agro-Industriel (Strasbourg, France)

Professional activities and memberships

Member of the American Chemical Society, Associazione Italiana di Ingegneria Chimica

Industrial collaborations with Advanced Accelerator Technologies, Azbil Telstar Technologies, Chiesi Farmaceutici, Domori, Fresenius Kabi, GiPharma, Glaxo Smith Kline, Novartis, Probiotical, Sanofi Pasteur, Stevenato, Synthon Biopharmaceuticals, Zymenex

Journal referee for ACTA Press, Advances in Materials Science and Engineering, AIChE Journal, Analytical Chemistry, Biosystems Engineering, BioMed Research International, the Canadian Journal of Chemical Engineering, Chemical Engineering Journal, Chemical Engineering Research and Design, Chimica Oggi/Chemistry Today, Current Drug Delivery, Drying Technology, Drug Development and Industrial Pharmacy, Environmental Progress, European Journal of Pharmaceutics and Biopharmaceutics, Frontiers in Chemistry, International Journal of Food Engineering, International Journal of Modeling and Simulation, International Journal of Nanomedicine, International Journal of Pharmaceutics, Journal of Crystal Growth, Journal of Drug Delivery Science and Technology, Journal of Food Engineering, Journal of Food Process Engineering, Journal of Pharmaceutical Sciences, Pharmaceutical Development and Technology, Powder Technology, Processes, Saudi Pharmaceutical Journal, Sensors, Sensors & Actuators: A. Physical

External referee for a number of funding bodies including Massachusetts Institute of Technology (Cambridge, USA), the Natural Sciences and Engineering Research Council of Canada (NSERC), the Research Foundation Flanders (Belgium)

Grants, Honors and Awards

2020	The editors of Journal of Pharmaceutical Sciences selected the paper Arsiccio and Pisano, J Pharm Sci 2020, 109(7): 2116-2130, to be featured under the "Free Virtual Issue" tab (Virtual Issue: Most Original and Most Significant Scientific Findings). This paper was selected for this distinction because the Editors felt it contained "particularly original and significant" scientific findings.
2018	The editors of Journal of Pharmaceutical Sciences selected the paper Arsiccio and Pisano (2018), J Pharm Sci **107**(6): 1586-1596 as a “featured article” for his original and significant scientific findings.
2018	The editorial board of European Journal of Pharmaceutics and Biopharmaceutics selected the paper Arsiccio and Pisano (2018), Eu J Pharm Biopharm **129**:58-65, and andArsiccio and Pisano (2018), Eu J Pharm Biopharm **128**: 98-106, as a “featured article” for his original and significant scientific findings.
2018	The editorial board of Journal of Pharmaceutical Research selected the paper Arsiccio and Pisano, Pharm Res 2018, 35, article no. 131, as a “featured article” for his original and significant scientific findings.
2018	The editorial board of Stay Current – Formulation of Biopharmaceuticals selected the paper Arsiccio and Pisano, J Chem Phys 2018, 148: 055108 for his original and significant scientific findings in formulation and process development.
2013	Professor Louis Rey Award received from the International Society of Lyophilization/Freeze-Drying (Waunakee, WI, USA)
2013	The editorial board of Stay Current Journal selected the paper Pisano et al. (2013), Pharm Dev Technol, 18(1): 280-295, and Pisano et al., AAPS PharmSciTech (2013), 14(3): 1137-1149, 2013 for his original and significant scientific findings
2012	The editorial board of Journal of Pharmaceutical Sciences selected the paper Fissore et al., J Pharm Sci, 100(11):4922-4933, 2011 for his original and significant scientific findings
2009	Politecnico di Torino Award for outstanding PhD thesis
2009	Award received from the Doctoral School of Politecnico di Torino for the outstanding results obtained during his PhD studies

2008	VetterPharma-Fertigung GmbH Conference Fellowship for outstanding poster presentation (6-9 August 2008, Breckenridge, Colorado, USA)
2007	Procter & Gamble Fellowship to attend the R&D European PhD Seminar at P&G (2-5 April 2007, Germany)

Supervision of graduate students and postdoctoral fellows

Supervision of 10 PhD fellows in Chemical Engineering at Politecnico di Torino, 45 Master of Science students in Chemical Engineering at Politecnico di Torino, 1 Master of Science students in Industrial Biotechnology at Università di Torino, 2 Master of Science students in Materials Engineering at Politecnico di Torino

Training tutor for Undergraduate Students from École nationale supérieure des Mines d'Albi-Carmaux (FR), Indian Institute of Technology (India), IUT A – Lyon 1 (FR), Ege University (Turkey)

Teaching experience

Roberto Pisano is currently Professor of *Manufacturing of biopharmaceuticals* (MSc in Chemical and sustainable processes engineering, PoliTo) and *Transport Phenomena and Safety* (BSc in Material Engineering, BSc in Chemical and Food Engineering, PoliTo)

Institutional responsibilities

2015 – present	Member of the Committee on Time Schedule for Chemical Engineering
2015 – present	Member of the Committee on Corporate Image of Department of Applied Science and Technology, Politecnico di Torino
2014 – present	Member of Doctoral School in Chemical Engineering, Politecnico di Torino, Italy
2011 – present	Member of the Faculty Committee of Chemical Engineering and Materials, Department of Applied Science and Technology, Politecnico di Torino, Italy
2010 – present	Graduate Student Advisor, Politecnico di Torino, Italy
2011 – 2015	Tutor for undergraduate students in Chemical and Food Engineering, Politecnico di Torino

Commissions of trust

2021 – present	Member of the Editorial Board for Journal of Applied Pharmaceutical Science
2020 – present	Member of the Editorial Board for Processes journal
2020 – present	Member of the Editorial Board for European Journal of Volunteering and Community-Based Projects
2014 – 2018	Member of the Editorial Board for the Drug Designing journal
2014 - present	Evaluator of research proposals submitted to various international institutions, including the Research Foundation Flanders (Fonds Wetenschappelijk Onderzoek - Vlaanderen, FWO), Ghent University, the Natural Sciences and Engineering Research Council of Canada
2017 – present	MIT faculty committee to evaluate proposals submitted to MISTI Global Seed Funds
2019	Chair (working with Dr. Jos Corver and Prof. Thomas De Beer) of the 9th International Conference on Lyophilization/Freeze-drying (ISLFD 2019) organized by the International Society of Lyophilization and Freeze-Drying, Ghent, Belgium
2019	Member of the Organizing Committee for the 7th European Drying Conference (EuroDrying 2019), Torino, Italy

2017 – 2018	Guest Editor of European Journal of Pharmaceutics and Bipharmaceutics (special issue on "ISLFD-2017: New Ventures in Freeze-Drying", Pisano R. and De Beer T., editors)2017 Scientific Advisory Board of the International Conference on Lyophilization (ISL-FD2017), International Society of Lyophilization/Freeze-Drying, Cuba
2016	Member of the Committee for the Best Poster Awards and Chairman of the session on "Fundamentals, modeling and simulation" of IDS2016, the 20th International Drying Symposium, Gifu, Japan.
2015	Scientific Advisory Board and chairman of the International Conference on Lyophilization (ISL-FD2015), International Society of Lyophilization/Freeze-Drying, Barcellona, Spain
2014	Reviewer for "ICCMREA 2014", "IEEE MeMeA2014", "PCM 2014", "ISL-FD 2015" conferences

Current scientific collaborations

Molecular inclusion of ethylene into cyclodextrin, prof. Claudia Barolo, Department of Chemistry, Università degli Studi di Torino, Italy

On the use of cyclodextrin-based nanosponges as non-polar gas adsorbent, prof. Francesco Trotta, Macromolecular Laboratory, Department of Chemistry, Università degli Studi di Torino, Italy

Synthesis of functionalized surfaces, Dr. Giacome Ceccone, Joint Research Centre, European Commission, Italy

Development of PAT systems for monitoring the lyophilization process, prof. Thomas De Beer, Department of Pharmaceutical Analysis, Ghent University, Belgium

Spray freeze-drying, prof. Kyuya Nakagawa, Chemical Engineering Department, University of Kyoto, Japan

Lyophilization of the biopharmaceutics, dr. Paul Matejtschuk, National Institute for Biological Standards and Control, London, UK

QbD in freeze-drying of drug products, Prof. Franco Pattarino, Dipartimento di Scienza del farmaco, Università del Piemonte Orientale, Italy

Continuous technologies for the pharmaceutical industry, prof. Bernhardt Trout, Molecular Engineering Laboratory, Department of Chemical Engineering, Massachusetts Institute of Technology, USA

Production of nanocapsules for drug delivery, Prof. Maria Grazia Spillantini, Department of Clinical Neurosciences, University of Cambridge, Cambridge UK; Prof. Giancarlo Rizza, Laboratoire des Solides Irradiés, CEA-IRAMIS-CNRS, Ecolé Polytechnique, Palaiseau Cedex, France; Prof. Tara Schiller, Multiscale Materials Group, University of Warwick, UK

Aerosol photopolymerization for the synthesis of micro-particles, Prof. Michael Wörner, Institute of Process Engineering in Life Sciences, Karlsruhe Institute of Technology, Germany

Crystallization of proteins, Dr. José A. Gavira, Laboratorio de Estudios Cristalográficos, IACT (CSIC–UGR), Spain

Molecular simulations applied to pharmaceutical formulations, prof. Joan-Emma Shea, Department of Physics, University of California Santa Barbara, USA

Sterilization of biogical products, Prof. Louis Rey (till 2010) and Dr. Florent Kuntz, Centre de Ressources Technologiques, Institut Technique Agro-industriel, France

Investigation of interactions between proteins and excipients, Prof. Gerhard Winter, Department Pharmazie, Ludwig-Maximilians-Universität München, Germany

Recent research projects and funded grants

Research project funded by Fresenius Kabi (Villadose, Italy) entitled "Liofilizzazione di soluzioni contenenti antibiotici e peptidi ad uso terapeutico", 2022-2023

Research project funded by GlaxoSmithKline Biologicals (Rixensart, Belgium) entitled “Scale-down modeling of the filling process for a vaccine production”, 2020-2023

Research project funded by Compagnia San Paolo, Joint Research Projects with Top University, entitled “Spray freeze-drying as an emerging technology for the preservation of biological macromolecules” (LYOSPRAY), 2019-2022

Research project funded by Chiesi Farmaceutici (Parma, Italy) entitled “Development of a lyophilization cycle for pulmonary surfactants”, 2020-2021

Research project funded by Bracco Suisse (Geneva, Switzerland) entitled “Development and scale-up of a lyophilization cycle for contrast agents”, 2021-2022

Research project funded by Probiotical (Novara, Italy) entitled “Scale-up e ottimizzazione del processo di liofilizzazione di una biomassa microbica”, 2021

Research project funded by Chiesi Farmaceutici (Parma, Italy) entitled “Verifica di un ciclo di liofilizzazione e sua ottimizzazione”, 2021

Research project funded by Nuova Ompi (Piombino Dese, Italy) entitle “The study of the impact of freeze-drying cycles on the Principal’s glass containers, both with and without plastic packaging, and the verification of the mechanical properties of the containers themselves”, 2021

Research project funded by Fresenius Kabi (Villadose, Italy) entitled “Liofilizzazione di peptidi a uso terapeutico”, 2021-2022

Research project funded by Fresenius Kabi (Villadose, Italy) entitled “Liofilizzazione di peptidi a uso terapeutico”, 2020-2021

Research project funded by Fresenius Kabi (Villadose, Italy) entitled “Liofilizzazione di peptidi a uso terapeutico”, 2019-2020

Research project funded by Novartis DVS Transport D.O.O. (Lubiana, Slovenia) entitled “Supporting services regarding cycle development and scale-up of a pharmaceutical formulation”, 2019

Research project funded by Probiotical (Novara, Italy) entitled”Liofilizzazione di una biomassa batterica”, 2019

Research project funded by the Joint Research Centre European Commission, Framework of Access to the Joint Research Centre Physical Research Infrastructure (call Nr 2018-1- RD -Nanobiotech), entitled “Surface-induced crystallization”(SIC), 2018-2019

Research project funded by Chiesi Farmaceutici (Parma, Italy) entitled “Sviluppo e trasferimento di un ciclo di liofilizzazione su scala industriale di un surfattante sintetico”, 2018-2019

Research project funded by GiPharma (Saluggia, Italy) entitled “Sviluppo del ciclo di liofilizzazione per una formulazione contenente albumina umana”, 2018

Research project funded by Fresenius Kabi (Villadose, Italy) entitled “Liofilizzazione di una soluzione contenente oligopeptidi”, 2018-2019

Research project funded by Chiesi Farmaceutici (Parma, Italy) entitled “Studio di fattibilità relativo alla rimozione di acetonitrile da un preparato farmaceutico e sua formulazione”, 2017

Research project funded by Synthon Biopharmaceuticals (Nijmegen, The Netherlands) entitled “Development and scale-up of a freeze-drying cycle in the case of a formulation containing organic solvents”, 2017

Research project funded by Compagnia San Paolo & MIT International Science and Technology Initiatives (MISTI), Gobal Seed Funds – MITOR, entitled “Moving from batch to continuous freeze-drying of biopharmaceuticals”, 2015-2017

Research project funded by Synthon Biopharmaceuticals (Nijmegen, The Netherlands) entitled "Computer-aided development and scale up of freeze-drying cycles", 2016-2017.

Research project funded by Domori (None, Italy) entitled "sviluppo di un processo di liofilizzazione di un prodotto da destinarsi alla produzione di cioccolata in capsule", 2016-2017. [In collaboration with Prof. Davide Fissore]

Research project funded by Zymenex A/S (Hilleroed, Denmark) entitled "Freeze-drying of a biopharmaceutical product", 2015.

Collaborative project funded by Regione Piemonte (Italy) entitled "Sviluppo di materiali attivi per il rilascio controllato di gas nel confezionamento degli alimenti", 2014-2015.

Research project funded by Azbil-Telstar (Terrassa, Spain) entitled "Support for further validation of monitoring and control tools (Parte II)", 2014-2015. [In collaboration with Prof. Antonello Barresi]

Research project funded by Chiesi Farmaceutici (Parma, Italy) entitled "Studio di fattibilità e sviluppo del processo produttivo del CHF5633 Surfattante Sintetico mediante liofilizzazione (Parte II)", 2014-2015. [In collaboration with Prof. Antonello Barresi]

Research project funded by Glaxo Smith Kline Manufacturing (Parma, Italy) entitled "Modeling and optimization of the lyophilization process for pharmaceutical products", 2009-2010.

Publications output

To date Roberto Pisano is author of 108 papers on international peer reviewed journals, 11 book chapters, 1 edited book, 4 patents, and over 15 invited lectures & keynotes at international conferences. Scopus H-index: 26. First publication in 2007.

Torino, 31st August 2022

(Prof. Roberto Pisano)