



ELEONORA MARETTI

H-index: 8
N° of citations: 197
N° of articles: 23
Total IF: 95.405

PERSONAL DETAILS



May 13, 1988



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WORK EXPERIENCE

April 16, 2020 – present

POSTDOCTORAL RESEARCH

**Lab. of Drug Delivery and Targeting,
Department of Life Sciences, University of Modena
and Reggio Emilia**

Winner of a research grant from the Emilia Romagna region for “Micro-ReSkin: nanotechnology for skin reparation”.

- Design of a topical product for skin reparation using nanoparticle technology
- Development of a business model

May 7, 2020 – present

CO-FOUNDER & CHIEF EXECUTIVE OFFICER

**PerFormS s.r.l. (Start-up of University of Modena
and Reggio Emilia) www.performslab.com**

Developed and implemented business plan and strategy; identified and exploited new opportunities.

- Pro-actively participated in all facets of the company and worked closely with other executives to sustain growth and stabilized the business
- Author of 1 patent

July 8, 2019 – January 7, 2020

TEMPORARY CONTRACT

University of Modena and Reggio Emilia

Operating manager of the project “Development of biodegradable and biocompatible carriers for insecticide” in collaboration with Endura SpA.

- Physico-chemical characterization of the micro-carrier
- Photo stability test

June 16, 2018 – June 16, 2019

POSTDOCTORAL RESEARCH

University of Modena and Reggio Emilia

Operating manager of the project “Study of the interactions between lipid-based carriers and alveolar macrophages for the inhaled anti-tubercular therapy: the influence of the surface-decoration process”.





TONGUES

Mother tongue: Italian
Other: English (B1),
Spanish (A2)

SKILLS

Organizational

Ability to manage a research laboratory (project development, contacts with companies for quotes, order management), capacity in development of projects for funding, research projects, participation at conferences. Advisor of 9 theses (in Biotechnology and Chemical and Pharmaceutical Technologies)

Technical

Preparation of nano- and microparticles by using traditional and innovative methods. Good knowledge of laboratory equipment such as UV-VIS spectrometry, differential scanning calorimeter, drug dissolution instruments, Franz-cell, freeze-dryer, optical microscope, scanning electron microscopy, transmission electron microscopy, Fourier transform infrared spectroscopy, photon correlation spectroscopy, fast screening impactor, twin glass impinger, and high performance liquid chromatography. Direct working experiences in handling cell culture and

- Physico-chemical characterization of nanoparticles
- *In vitro* test on adherent cell culture
- Thesis advisor
- Processing for scientific articles

April 16 – May 29, 2018 and Nov 1 – Dec 31, 2017

RESEARCH ASSISTANT

University of Modena and Reggio Emilia

Management of 2 research projects on carrier for inhalation therapy and artificial *stratum corneum* models.

- Characterization and in vitro test of lipid carrier
- Permeation study across SC models
- Contacts and relations with suppliers
- Preparation of oral communication and posters
- Author of 2 patents

Sept 1 – Nov 1, 2014

POSTGRADUATE STAGE

Lab. of Nanotechnology and Drug Delivery,

Prof. Maria Jose Blanco Prieto

University of Navarra, Pamplona

Research project on “Cytotoxicity and internalization of Solid Lipid Microparticles as inhaled carriers of rifampicin”.

- *In vitro* test on suspension cell culture
- Optimization of freeze-drying condition

Feb 15 – sept 1, 2014 and may 1, 2013 – jan 1, 2014

RESEARCH ASSISTANT

University of Modena and Reggio Emilia

Management of 2 research projects on design and validation of nanoparticles for tuberculosis therapy and nanoclay for *Helicobacter pylori* infection

- Executive agent of the projects
- Graduating students' supervisor

EDUCATION

Apr 20, 2020 – Dec 10, 2020

**PerFormS srl selected by G-Factor for acceleration
program “G-Force Life Science 2020”**

Fondazione Golinelli, Bologna





related tasks with capacity to perform treatments of cytotoxicity, numbering, coloration and treatment for the preparation of samples for analysis by flowcytometry and confocal microscopy. Statistical analysis using ANOVA test.

Informatics

Microsoft Office, Adobe Photoshop, Adobe Lightroom, GraphPad Prism, Windows, Mac OS, iMovie,

Social

Very good adaptability and collaboration in the workplace group, excellent communication skills with companies, agencies and organizations

PROFESSIONAL SOCIETY MEMBERSHIP

Società dei Matematici e Naturalisti di Modena

HOBBIES AND INTEREST

Photography and cooking

In compliance with the GDPR and the Italian Legislative Decree no. 196 dated 30/06/2003, I hereby authorize you to use and process my personal details contained in this document.

Apr 1, 2019 – Jul 1, 2019

School of Innovation and Entrepreneurship The ReActor program

Fondazione Golinelli, Bologna

Selected for business project “Micro-ReSkin”, a dermocosmetic cream for skin reparation using nanoparticle technology.

Nov 1, 2014 – Nov 1, 2017

Ph.D. in Clinical and Experimental Medicine (Medicinal and Pharmaceutical Sciences curriculum)

University of Modena and Reggio Emilia

Thesis entitled “Anti-tuberculosis therapy by pulmonary route: passive and active targeting to macrophages using lipid nanoparticle assemblies”

Nov 1, 2010 – Apr 15, 2013

Master’s degree in Medical and Pharmaceutical Biotechnology (Pharmaceutical curriculum)

University of Modena and Reggio Emilia

Thesis entitled “Inhaled drug delivery system to target alveolar macrophages for tuberculosis therapy: design of safe SLM loaded with rifampicin”. Final mark: 110/110

Oct 1, 2007 – Oct 20, 2010

Bachelor’s degree in Pharmaceutical Biotechnology

University of Modena and Reggio Emilia

Thesis entitled “Validation of Hsp90 and HDAC6 dual inhibitors by virtual screening”. Final mark: 104/110

Sept 10, 2002 – Jun 12, 2007

High School Biology Diploma

Istituto tecnico per le attività sociali A. Mantegna, Mantova
Final mark: 95/100





SCIENTIFIC PUBLICATIONS

- Eleonora Maretti, Eliana Leo, Cecilia Rustichelli, Eleonora Truzzi, Cristina Siligardi, Valentina Iannuccelli. *In vivo* β -carotene skin permeation modulated by Nanostructured Lipid Carriers. *International Journal of Pharmaceutics*. 2021. In press (IF2019: 4.845).
- Eleonora Maretti, Barbara Pavan, Cecilia Rustichelli, Monica Montanari, Alessandro Dalpiaz, Valentina Iannuccelli, Eliana Leo. Chitosan/heparin polyelectrolyte complexes as ion-pairing approach to encapsulate heparin in orally administrable SLN: In vitro evaluation. *Colloids and Surfaces A*. 2021. 608: 125606. DOI: <https://doi.org/10.1016/j.colsurfa.2020.125606>. (IF2019: 3.990).
- Gaetano Marverti, Gaia Gozzi, Eleonora Maretti, Angela Lauriola, Leda Severi, Francesca Sacchetti, Lorena Losi, Salvatore Pacifico, Stefania Ferrari, Glauco Ponterini, Eliana Leo, Maria Paola Costi, Domenico D'Arca. A Peptidic Thymidylate-Synthase Inhibitor Loaded on Pegylated Liposomes Enhances the Antitumour Effect of Chemotherapy Drugs in Human Ovarian Cancer Cells. *International Journal of Molecular Sciences*. 2020. 21: 4452. DOI: <http://doi.org/10.3390/ijms21124452>. (IF2019: 4.556).
- Eleonora Truzzi, Thais Leite Nascimento, Valentina Iannuccelli, Luca Costantino, Eliana Martins Lima, Eliana Leo, Cristina Siligardi, Magdalena Lassinantti Gualtieri, Eleonora Maretti. In Vivo Biodistribution of Respirable Solid Lipid Nanoparticles Surface-Decorated with a Mannose-Based Surfactant: A Promising Tool for Pulmonary Tuberculosis Treatment?. *Nanomaterials*. 2020. 10: 568. DOI: <http://doi.org/10.3390/nano10030568>. (IF: 4.034).
- Edilson Ribeiro de Oliveira Junior, Eleonora Truzzi, Luca Ferraro, Marco Fogagnolo, Barbara Pavan, Sarah Beggiato, Cecilia Rustichelli, Eleonora Maretti, Eliana Martins Lima, Eliana Leo, Alessandro Dalpiaz. Nasal administration of nanoencapsulated geraniol/ursodeoxycholic acid conjugate: Towards a new approach for the management of Parkinson's disease. *Journal of Controlled Release*. 2020. 321: 540-554. DOI: <https://doi.org/10.1016/j.jconrel.2020.02.033>. (IF2019: 7.727).
- Eleonora Maretti, Cecilia Rustichelli, Magdalena Lassinantti Gualtieri, Luca Costantino, Cristina Siligardi, Paola Miselli, Francesca Buttini, Monica Montecchi, Eliana Leo, Eleonora Truzzi, Valentina Iannuccelli. The Impact of Lipid Corona on Rifampicin Intramacrophagic Transport Using Inhaled Solid Lipid Nanoparticles Surface-Decorated with a Mannosylated Surfactant. *Pharmaceutics*. 2019. 11: 508. DOI: <http://doi.org/10.3390/pharmaceutics11100508>. (IF2019: 4.773).
- Alessandro Dalpiaz, Marco Fogagnolo, Luca Ferrero, Sarah Beggiato, Miriam Hanuskova, Eleonora Maretti, Francesca Sacchetti, Eliana Leo, Barbara Pavan. Bile salt-coating modulates the macrophage uptake of nanocores constituted by a zidovudine prodrug and enhances its nose-to-brain delivery. *European Journal of Pharmaceutics and Biopharmaceutics*. 2019. 144: 91-100. DOI:





<https://doi.org/10.1016/j.ejpb.2019.09.008>. (IF2019: 4.604).

- Eleonora Truzzi, Fiorella Meneghetti, Matteo Mori, Luca Costantino, Valentina Iannuccelli, Eleonora Maretti, Fabio Domenici, Carlo Castellano, Sarah Rogers, Angela Capocéfalo, Eliana Leo. Drugs/lamellae interface influences the inner structure of double-loaded liposomes for inhaled anti-TB therapy: An in-depth small-angle neutron scattering investigation. *Journal of Colloid and Interface Science*. 2019. 541: 399-406. DOI: <https://doi.org/10.1016/j.jcis.2019.01.094>. (IF2019: 7.489).

- Eleonora Maretti, Cecilia Rustichelli, Paola Miselli, Eliana Leo, Eleonora Truzzi, Valentina Iannuccelli. Self-assembled organogelators as artificial stratum corneum models: key-role parameters for skin permeation prediction. *International Journal of Pharmaceutics*. 2019. 557: 314-328. DOI: <https://doi.org/10.1016/j.ijpharm.2018.12.071>. (IF2019: 4.845).

- Eleonora Maretti, Luca Costantino, Francesca Buttini, Cecilia Rustichelli, Eliana Leo, Eleonora Truzzi, Valentina Iannuccelli. Newly synthesized surfactants for surface mannosylation of respirable SLN assemblies to target macrophages in tuberculosis therapy. *Drug Delivery and Translational Research*. 2019. 9: 298-310. DOI: <https://doi.org/10.1007/s13346-018-00607-w>. (IF2019: 2.664).

- Francesca Sacchetti, Gaetano Marverti, Domenico D'Arca, Leda Severi, Eleonora Maretti, Valentina Iannuccelli, Salvatore Pacifico, Glauco Ponterini, Maria Paola Costi, Eliana Leo. pH-Promoted Release of a Novel Anti-Tumour Peptide by "Stealth" Liposomes: Effect of Nanocarriers on the Drug Activity in Cis- Platinum Resistant Cancer Cells. *Pharmaceutical Research*. 2018. 35: 206. DOI: <https://doi.org/10.1007/s11095-018-2489-z>. (IF2019: 3.242).

- Valentina Iannuccelli, Eleonora Maretti, Alessia Bellini, Daniele Malferrari, Guido Ori, Monia Montorsi, Moreno Bondi, Eleonora Truzzi, Eliana Leo. Organo-modified bentonite for gentamicin topical application: interlayer structure and in vivo skin permeation. *Applied Clay Science*. 2018. 158: 158-168. DOI: <https://doi.org/10.1016/j.clay.2018.03.029>. (IF2019: 4.605).

- Eleonora Maretti, Luca Costantino, Cecilia Rustichelli, Eliana Leo, Maria Antonietta Croce, Francesca Buttini, Eleonora Truzzi, Valentina Iannuccelli. Surface engineering of Solid Lipid Nanoparticle assemblies by methyl α -D-mannopyranoside for the active targeting to macrophages in anti-tuberculosis inhalation therapy. *International Journal of Pharmaceutics*. 2017. 528: 440-451. DOI: <http://dx.doi.org/10.1016/j.ijpharm.2017.06.045>. (IF2019: 4.845).

- Eleonora Truzzi, Chiara Bongio, Francesca Sacchetti, Eleonora Maretti, Monica Montanari, Valentina Iannuccelli, Elena Vismara, Eliana Leo. Self-assembled lipid nanoparticles for oral delivery of heparin-coated iron oxide nanoparticles for theranostic purposes. *Molecules*. 2017. 22: 963-980. DOI: <http://dx.doi.org/10.3390/molecules22060963>. (IF2019: 3.267).

- Valentina Iannuccelli, Eleonora Maretti, Francesca Sacchetti, Marcello Romagnoli, Alessia Bellini, Eleonora Truzzi, Paola Miselli, Eliana Leo. Characterization of natural clays from Italian deposits with the focus on elemental composition and exchange estimated by EDX analysis for potential pharmaceutical and cosmetic uses. *Clays and Clay Minerals*. 2016. 64: 719-731. DOI: <http://dx.doi.org/10.1346/CCMN.2016.064038>. (IF2019: 1.507).

- Francesca Sacchetti, Domenico D'Arca, Filippo Genovese, Salvatore Pacifico, Eleonora Maretti, Miriam Hanuskova, Valentina Iannuccelli, Maria Paola Costi, Eliana Leo. Conveying a newly designed hydrophilic anti-human thymidylate synthase peptide to cisplatin resistant cancer cells: are





pH-sensitive liposomes more effective than conventional ones? *Drug Development and Industrial Pharmacy*. 2016. 43: 465-473. DOI: <http://dx.doi.org/10.1080/03639045.2016.1262870>. (IF2019: 2.365).

- Eleonora Maretti, Cecilia Rustichelli, Marcello Romagnoli, Anna Giulia Balducci, Francesca Buttini, Francesca Sacchetti, Eliana Leo, Valentina Iannuccelli. Solid Lipid Nanoparticle assemblies (SLNas) for an anti-TB inhalation treatment-A Design of Experiments approach to investigate the influence of pre-freezing conditions on the powder respirability. *International Journal of Pharmaceutics*. 2016. 511: 669-679. DOI: <http://dx.doi.org/10.1016/j.ijpharm.2016.07.062>. (IF2019: 4.845).

- Alessandro Dalpiaz, Francesca Sacchetti, Anna Baldisserotto, Barbara Pavan, Eleonora Maretti, Valentina Iannuccelli, Eliana Leo. Application of the “in-oil nanoprecipitation” method in the encapsulation of hydrophilic drugs in PLGA nanoparticles. *Journal of Drug Delivery Science and Technology*. 2016. 32: 283-290. DOI: <http://dx.doi.org/10.1016/j.jddst.2015.07.020>. (IF2019: 2.734).

- Valentina Iannuccelli and Eleonora Maretti. Inhaled Micro- or Nanoparticles: Which are the Best for Intramacrophagic Antiinfectious Therapies?. *Journal of Infectious Disease and Diagnosis*. 2015. 1: 1. DOI: <http://dx.doi.org/10.4172/2576-389X.1000e102>.

- Francesca Sacchetti, Chiara Marraccini, Domenico D’Arca, Michela Pelà, Diego Pinetti, Eleonora Maretti, Miriam Hanusková, Valentina Iannuccelli, Maria Paola Costi, Eliana Leo. Enhanced anti-hyperproliferative activity of human thymidylate synthase inhibitor peptide by Solid Lipid Nanoparticle delivery. *Colloids and Surfaces B*. 2015. 136: 346-354. DOI: <http://dx.doi.org/10.1016/j.colsurfb.2015.09.040>. (IF2019: 4.389).

- Valentina Iannuccelli, Eleonora Maretti, Monica Montorsi, Cecilia Rustichelli, Francesca Sacchetti, Eliana Leo. Gastroretentive montmorillonite-tetracycline nanoclay for the treatment of *Helicobacter pylori* infection. *International Journal of Pharmaceutics*. 2015. 493: 295-304. DOI: <http://dx.doi.org/10.1016/j.ijpharm.2015.06.049>. (IF2019: 4.845).

- Eleonora Maretti, Tiziana Rossi, Moreno Bondi, Miriam Hanuskova, Eliana Leo, Francesca Sacchetti, Valentina Iannuccelli. Inhaled Solid Lipid Microparticles to target alveolar macrophages for tuberculosis therapy. *International Journal of Pharmaceutics*. 2014. 462: 74-82. DOI: <http://dx.doi.org/10.1016/j.ijpharm.2013.12.034>. (IF2019: 4.845).

- Valentina Iannuccelli, Davide Bertelli, Marcello Romagnoli, Santo Scalia, Eleonora Maretti, Francesca Sacchetti, Eliana Leo. In vivo penetration of bare and lipid-coated silica nanoparticles across the human stratum corneum. *Colloids and Surfaces B*. 2014. 122: 653-661. DOI: <http://dx.doi.org/10.1016/j.colsurfb.2014.07.046>. (IF2019: 4.389).

