

Europass Curriculum Vitae



Personal information

First name(s) / Surname(s) **Micol Massimiani**

E-mail **micol9@libero.it; micol.massimiani@unicamillus.org**

Nationality **Italian**

Date of birth **09/02/1984**

Gender **Female**

Work experience

May 2022 - present **Guest Editor** of "Life" journal (ISSN: 2075-1729; IF 3.817), special issue "Placental Development Research"

March – August 2022 **Maternity leave**

2021 – present **Reviewer** for the MDPI scientific journals Cells (ISSN: 2073-4409; IF 6.600), Life (ISSN: 2075-1729; IF 3.817), Genes (ISSN: 2073-4425; IF 4.096), Reproductive Medicine (ISSN: 2673-3897)

November 2018 - present **Teaching activity:** Histology and Embryology at UniCamillus Saint Camillus International University of Health and Medical Sciences for the course in: Medicine and Surgery, Dentistry and Dental Prosthetics, Physiotherapy, Nursing, Midwifery, Biomedical Laboratory Techniques, Radiology, Diagnostic Imaging and Radiotherapy Techniques

November 2018 - present **Type A researcher**, BIO/17, at UniCamillus Saint Camillus International University of Health and Medical Sciences

August 2017 – November 2018 **Renewal of Research Fellow on the program "Impact of engineered nanoparticles on reproductive health and embryonic development"** at the Dep. of Biomedicine and Prevention of the University of Rome "Tor Vergata"

March – August 2018 **Maternity leave**

Academic year 2016-2017 **Tutoring in the Integrated Course of Cytology and Histology** of the Bachelor Degree in Medical Engineering at the Faculty of Engineering of the University of Rome "Tor Vergata"

July 2016 – July 2017	Renewal of Research Fellow on the program "Impact of engineered nanoparticles on reproductive health and embryonic development" at the Dep. of Biomedicine and Prevention of the University of Rome "Tor Vergata"
Academic year 2015-2016	Tutoring in the Integrated Course of Cytology and Histology of the Bachelor Degree in Medical Engineering at the Faculty of Engineering of the University of Rome "Tor Vergata"
Academic year 2015-2016	Collaboration in teaching the discipline "Histology" in the Integrated Course of Histology at the Faculty of Medicine at the University "Our Lady of Good Counsel" in Tirana
July 2015 – June 2016	Renewal of Research Fellow on the program "Impact of engineered nanoparticles on reproductive health and embryonic development" at the Dep. of Biomedicine and Prevention of the University of Rome "Tor Vergata"
Academic year 2014-2015	Collaboration in teaching the discipline "Histology" in the Integrated Course of Histology at the Faculty of Medicine at the University "Our Lady of Good Counsel" in Tirana
Academic year 2014-2015	Tutoring in the Integrated Course of Cytology and Histology of the Bachelor Degree in Medical Engineering at the Faculty of Engineering of the University of Rome "Tor Vergata"
July 2014 – June 2015	Research Fellow on the program "Impact of engineered nanoparticles on reproductive health and embryonic development" at the Dep. of Biomedicine and Prevention of the University of Rome "Tor Vergata"

Education and training

March 2017	Workshop " Human Pluripotent Stem Cell (hPSC) " at the University of Rome "Tor Vergata"
January 2015	Course for " Access to the use of the Service Animal Testing Facilities " at the University of Rome "Tor Vergata"
January 2014	PhD in Sciences and Biotechnologies of Reproduction and Development at the Faculty of Medicine and Surgery of the University of Rome "Tor Vergata"
November - December 2011	Research experience at Prof. Heidi Stuhlmann laboratory at Weill Cornell Medical College in New York
November 2010	Authorization to practice the profession of Biologist
October 2010	Attendance at Second Nanosafety Autumn School at Ca' Foscari University of Venice
March 2010	Degree in Medical Biotechnologies at the Faculty of Medicine and Surgery of the University of Rome "Tor Vergata" (Grade: 110/110 cum laude)
July 2007	Degree in Biotechnologies at the Faculty of Sciences MM.FF.NN. of the University of Rome "Tor Vergata" (Grade: 110/110)

Personal skills and competences

Mother tongue(s)

Italian

Other language(s)

English

Self-assessment

European level (*)

Italian

English

Understanding				Speaking				Writing			
Listening		Reading		Spoken interaction		Spoken production					
	C2		C2		C2		C2				C2
	B2		B2		B2		B2				B2

(*) [Common European Framework of Reference for Languages](#)

Technical skills and competences

Knowledge of molecular biology and biochemistry techniques (DNA and RNA extraction, nucleic acid amplification, PCR, RT-PCR, qRT-PCR, Western blot, zymography, immunoprecipitation and co-immunoprecipitation, pull-down assay, ELISA assays) and cellular biology techniques (cell cultures, embryonic stem cell cultures, isolation e culture of human primary cells, transfections and infections with lentiviral vectors, DNA and RNA extraction from different cell line, immunofluorescence, immunohistochemistry, proliferation, migration and invasion assays), ability to work with small laboratory animals and ability to evaluate toxic effects of engineered nanomaterials (carbon nanotubes, silica nanoparticles, zinc and titanium, nanocerium) using *in vitro* and *in vivo* tests on embryos and adult animals

Computer skills and competences

Knowledge of the operative systems Microsoft Windows 9x, XP Home/Professional, Vista, 7, 8, 10; computergraphics (Adobe Photoshop, GraphPad, SigmaPlot); Office package (Word, Excel, Power-Point)

Knowledge of bioinformatic tools available online e programs for statistics analysis (Sigmastat, Sigmaplot)

Driving licence

Italian driving licence B

1. Valentina Lacconi, **Micol Massimiani**, Lorenzo Paglione, Domenico Antonaci, Caterina Meneghini, Asgerally T. Fazleabas, Heidi Stuhlmann, Rocco Rago, Carlo Ticconi, Luisa Campagnolo. Characterization of EGFL7 expression in normal endometrium and in the endometrium of women with poor reproductive outcome. Submitted.
2. Lacconi V*, **Massimiani M***, Paglione L, Messina A, Battistini B, De Filippis P, Magrini A, Pietroiusti A, Campagnolo L. An improved in vitro model simulating the fetomaternal interface to study developmental effects of potentially toxic compounds: The example of titanium dioxide nanoparticles. *Toxicol Appl Pharmacol.* 2022;446:116056. doi: 10.1016/j.taap.2022.116056.
*co-first authors.
3. Claudio Manna, Valentina Lacconi, Giuseppe Rizzo, Antonino De Lorenzo and **Micol Massimiani**. Placental Dysfunction in Assisted Reproductive Pregnancies: Perinatal, Neonatal and Adult Life Outcomes. *Int. J. Mol. Sci.* 2022, 23(2), 659; <https://doi.org/10.3390/ijms23020659>.
4. **Micol Massimiani**, Silvia Salvi, Grazia M. Tiralongo, Sascia Moresi, Heidi Stuhlmann, Herbert Valensise, Antonio Lanzone, Luisa Campagnolo. Circulating EGFL7 distinguishes between IUGR and PE: an observational case-control study. *Sci Rep* 2021;11:17919. <https://doi.org/10.1038/s41598-021-97482-2>.
5. Antonella Camaioni, **Micol Massimiani**, Valentina Lacconi, Andrea Magrini, Antonietta Salustri, Georgios A. Sotiriou, Dilpreet Singh, Dimitrios Bitounis, Beatrice Bocca, Anna Pino, Flavia Barone, Valentina Prota, Ivo Iavicoli, Manuel Scimeca, Elena Bonanno, Flemming R. Cassee, Philip Demokritou, Antonio Pietroiusti and Luisa Campagnolo. Silica encapsulation of ZnO nanoparticles reduces their toxicity for cumulus cell-oocyte-complex expansion. *Part Fibre Toxicol.* 2021;18(1):33. doi: 10.1186/s12989-021-00424-z.
6. Alessandro Dal Lago, Francesco Galanti, Donatella Miriello, Antonella Marcocchia, **Micol Massimiani**, Luisa Campagnolo, Costanzo Moretti, Rocco Rago. Positive Impact of Levothyroxine Treatment on Pregnancy Outcome in Euthyroid Women with Thyroid Autoimmunity Affected by Recurrent Miscarriage. *J Clin Med.* 2021 May 13;10(10):2105. doi: 10.3390/jcm10102105.
7. **Micol Massimiani**, Grazia M. Tiralongo, Silvia Salvi, Stefano Fruci, Valentina Lacconi, Fabio La Civita, Marta Mancini, Heidi Stuhlmann, Herbert Valensise, and Luisa Campagnolo. Treatment of pregnancies complicated by intrauterine growth restriction with nitric oxide donors increases placental expression of Epidermal Growth Factor-Like Domain 7 and improves fetal growth: a pilot study. *Transl Res.* 2021;228:28-41. doi: 10.1016/j.trsl.2020.08.002.
8. **Micol Massimiani**, Valentina Lacconi, Fabio La Civita, Carlo Ticconi, Rocco Rago and Luisa Campagnolo. Molecular pathways involved in endometrium-blastocyst crosstalk. *Int J Mol Sci.* 2019;21(1).pii:E23. doi: 10.3390/ijms21010023.
9. **Micol Massimiani**¹, Laretta A. Lacko¹, Clare S. Burke Swanson, Silvia Salvi, Lissenya B. Argueta, Sascia Moresi, Sergio Ferrazzani, Shari E. Gelber, Rebecca N. Baergen, Nicola Toschi, Luisa Campagnolo², Heidi Stuhlmann². Increased circulating levels of epidermal growth factor-like domain 7 in pregnant women affected by preeclampsia. *Transl Res.* 2019;207:19-29. doi: <https://doi.org/10.1016/j.trsl.2018.12.004>.
¹These authors should be regarded as joint first authors.
²These authors share senior authorship.
10. Antonio Pietroiusti, Lucia Vecchione, Maria Ada Malvindi, Cinzia Aru, **Micol Massimiani**, Antonella Camaioni, Andrea Magrini, Roberta Bernardini, Stefania Sabella, Pier Paolo Pompa, Luisa Campagnolo. Relevance to investigate different

stages of pregnancy to highlight toxic effects of nanoparticles: the example of silica. *Toxicol Appl Pharmacol.* 2018;342:60-68. doi: 10.1016/j.taap.2018.01.026.

11. Diletta Piccirilli[#], Enke Baldini[#], **Micol Massimiani**, Antonella Camaioni, Antonietta Salustri, Roberta Bernardini, Marco Centanni, Salvatore Ulisse, Costanzo Moretti and Luisa Campagnolo. Thyroid hormone regulates protease expression and activation of Notch signaling in implantation. *J Endocrinol.* 2018;236(1):1-12. doi: 10.1530/JOE-17-0436.
[#] These authors equally contributed to the manuscript.
12. Luisa Campagnolo, **Micol Massimiani**, Lucia Vecchione, Diletta Piccirilli, Nicola Toschi, Andrea Magrini, Elena Bonanno, Manuel Scimeca, Luca Castagnozzi, Giorgio Buonanno, Luca Stabile, Francesco Cubadda, Federica Aureli, Paul H. B. Fokkens, Wolfgang G. Kreyling, Flemming R. Cassee, Antonio Pietroiusti. Silver Nanoparticles Inhaled during Pregnancy Reach and Affect the Placenta and the Foetus. *Nanotoxicology.* 2017;11(5):687-698. doi: 10.1080/17435390.2017.1343875.
13. **Massimiani M**, Salvi S, Piccirilli D, Vecchione L, Moresi S, Ferrazzani S, Stuhlmann H, Campagnolo L. A4. EGFL7 in placenta trophoblast and endothelial cells: implications in the pathogenesis of pre-eclampsia. *J Matern Fetal Neonatal Med.* 2016;29(sup2):4. doi: 10.1080/14767058.2016.1234765.
14. Luisa Campagnolo, Claudia Telesca, **Micol Massimiani**, Heidi Stuhlmann, Mario Angelico, Ilaria Lenci, Tommaso M. Manzia, Laura Tariciotti, Giorgia Lehmann and Leonardo Baiocchi. Different expression of VEGF and EGFL7 in human hepatocellular carcinoma. *Dig Liver Dis.* 2016;48(1):76-80. doi: 10.1016/j.dld.2015.09.019.
15. **Micol Massimiani**, Lucia Vecchione, Diletta Piccirilli, Paola Spitalieri, Francesca Amati, Silvia Salvi, Sergio Ferrazzani, Heidi Stuhlmann and Luisa Campagnolo. Epidermal growth factor-like domain 7 (EGFL7) promotes migration and invasion of human trophoblast cells through activation of MAPK, PI3K and NOTCH signaling pathways. *Mol Hum Reprod.* 2015;21(5):435-451. doi: 10.1093/molehr/gav006.
16. Laretta A. Lacko¹, **Micol Massimiani**¹, Jenny L. Sones, Romulo Hurtado, Silvia Salvi, Sergio Ferrazzani, Robin L. Davison, Luisa Campagnolo, Heidi Stuhlmann. Novel expression of EGFL7 in placental trophoblast and endothelial cells and its implication in preeclampsia. *Mech. Dev.* 2014;133:163-176. doi: 10.1016/j.mod.2014.04.001.
¹ These authors contributed equally to the studies in the manuscript.
17. Lucia Vecchione, **Micol Massimiani**, Antonella Camaioni, Luna Sifrani, Andrea Magrini, Antonio Pietroiusti and Luisa Campagnolo. A comparative study of metal oxide nanoparticles embryotoxicity using the embryonic stem cell test. *BioNanoMat.* 2013;14(1-2):61-64. doi: 10.1515/bnm-2013-00.
18. Luisa Campagnolo, **Micol Massimiani**, Graziana Palmieri, Roberta Bernardini, Cristiano Sacchetti, Antonio Bergamaschi, Lucia Vecchione, Andrea Magrini, Massimo Bottini and Antonio Pietroiusti. Biodistribution and toxicity of pegylated single wall carbon nanotubes in pregnant mice. *Part Fibre Toxicol.* 2013;10:21. doi: 10.1186/1743-8977-10-21.
19. Luisa Campagnolo, Ivana Fenoglio, **Micol Massimiani**, Andrea Magrini and Antonio Pietroiusti. Screening of nanoparticle embryotoxicity using embryonic stem cells. *Methods Mol Biol.* 2013;1058:49-60. doi: 10.1007/7651_2013_11.
20. Campagnolo L., **Massimiani M.**, Magrini A., Camaioni A., Pietroiusti A. Physico-Chemical Properties Mediating Reproductive and Developmental Toxicity of Engineered Nanomaterials. *Curr Med Chem.* 2012;19(26):4488-94. doi: 10.2174/092986712803251566.
21. Pietroiusti A., **Massimiani M.**, Fenoglio I., Colonna M., Valentini F., Palleschi G., Camaioni A., Magrini A., Siracusa G., Bergamaschi A., Sgambato A., Campagnolo L. Low doses of pristine and oxidized single-wall carbon nanotubes affect mammalian embryonic development. *ACS Nano.* 2011;5(6):4624-33. doi: 10.1021/nn200372g.

22. Magrini A., Campagnolo L., **Massimiani M.**, Pietroiusti A. Embryotoxic potential of engineered nanoparticles: Lessons from mammalian and non-mammalian species. *J.Nanosci.Lett.* 2011;1(3):186-190. ISSN: 2231-4008.

National and International conferences:

Micol Massimiani, Valentina Lacconi, Antonietta Salustri, Beatrice Bocca, Flavia Barone, Manuel Scimeca, Philip Demokritou, Antonella Camaioni and Luisa Campagnolo. Silica encapsulation of ZnO nanoparticles reduces their toxicity for cumulus cell-oocyte maturation. **Sessione Scientifica Collegio degli Istologi. 26 October 2020. Oral presentation.**

M. Massimiani, G. Tiralongo, V. Lacconi, M. Mancini, D. Farsetti, B. Lupoli, H. Valensise, L. Campagnolo. Plasma and placental expression of EGFL7 in pregnancies complicated by altered maternal hemodynamics and intrauterine growth restriction. **ISUOG's Virtual World Congress, 16-18 October 2020. Poster presentation.**

Massimiani M. Nanoparticles at the placental barrier: effects on the fetus. **Debugging Nanobio-interfaces to promote clinical translation, Mainz, Germany, 5-7 December 2019. Oral presentation.**

L. Campagnolo, V. Lacconi, G. Somma, **M. Massimiani**, F. La Civita, L. Paglione, A. Magrini, M. A. Malvindi, S. Sabella, P. P. Pompa, F. R. Cassee, A. Pietroiusti. Effects of Particles on the Placenta: studies on in vivo and in vitro models. **EUROTOX 2019, 55th Congress of European Societies of Toxicology, Helsinki, Finland, 8-11 September 2019.**

L. Campagnolo, V. Lacconi, F. La Civita, D. Antonaci, C. Meneghini, **M. Massimiani**, C. Ticconi, R. Rago. The EGFL7/NOTCH pathway: a novel regulator of the endometrium-blastocyst dialog. **ESHRE 2019, 35th annual meeting, Vienna, Austria, 23-26 June 2019.**

Tiralongo GM, **Massimiani M**, Lo Presti D, Cremona A, Lacconi V, Campagnolo L, Valensise H. A pilot study of fetal growth, maternal hemodynamics and plasma and placental expression of Epidermal Growth Factor Like Domain 7 in pregnancies complicated by fetal growth restriction treated with nitric oxide donors. **3rd International Congress on Maternal Haemodynamics, Cambridge, UK, 12-14 April 2018. Oral presentation.**

Lacconi V, **Massimiani M** and Campagnolo L. In vitro models for the study of reproductive toxicity of engineered nanomaterials. **Rome, September 26-29, 2017. Sapienza University of Rome – Faculty of civil and industrial engineering. Oral presentation.**

Piccirilli D., **Massimiani M.**, Baldini E., Ulisse S., Moretti C., Campagnolo L. Molecular mechanisms of thyroid hormone action during blastocyst implantation. **17th World Congress of the Academy of Human Reproduction, 15-18 March 2017, Rome, Italy.**

Lauretta A. Lacko, Romulo Hurtado, **Micol Massimiani**, Shari E. Gelber, Silvia Salvi, Luisa Campagnolo and Heidi Stuhlmann. Defects in fetoplacental vascularization and function in Egfl7 KO mice. **IVBM 2016, Boston (Massachusetts, USA), October 30 - November 3 2016.**

Massimiani M., Salvi S., Piccirilli D., Vecchione L., Moresi S., Ferrazzani S., Stuhlmann H., Campagnolo L. EGFL7 in placental trophoblast and endothelial cells: implications in the pathogenesis of pre-eclampsia. **Second International Congress on Maternal Haemodynamics, Rome, 12-14 May 2016. Oral presentation.**

Ferrazzani S., Salvi S., **Massimiani M.**, Moresi S., Del Sordo G., Stuhlmann H., Lanzzone A., Campagnolo L. Ruolo del EFG-like domain 7 nello sviluppo e impianto della placenta: implicazioni nella patogenesi della pre-eclampsia. **5^o National Congress AIPE, Taormina (ME), 19th-21st November 2015. Prize AIPE 2015.**

Lucia Vecchione, **Micol Massimiani**, Diletta Piccirilli, Andrea Magrini, Antonio Pietroiusti, Luisa Campagnolo. Chronic exposure to low dose ZnO and TiO₂ nanoparticles before pregnancy does not affect reproductive ability of CD1 female mice. **Nanosafety Forum for Young Scientists. 8-9th October 2014, Sicily.**

Micol Massimiani. Nanoreprotoxicology: an emerging field. **Nanoforum X Edition. Rome, September 22-25, 2014. Sapienza University of Rome – Faculty of civil and industrial engineering. Oral presentation.**

Micol Massimiani, Lucia Vecchione, Silvia Salvi, Sergio Ferrazzani, Heidi Stuhlmann and Luisa Campagnolo. Novel expression and molecular function of EGFL7 in human placental trophoblast. **Seduta Scientifica Collegio degli Istologi. University of Rome “La Sapienza”, 24th January 2014. Oral presentation.**

Organization of **MA.RI.NA. (Managing Risks of Nanomaterials) annual meeting. University of Rome “Tor Vergata”, 10th-11st December 2012.**

Micol Massimiani, Lucia Vecchione, Silvia Salvi, Francesca Amati, Sergio Ferrazzani, Heidi Stuhlmann and Luisa Campagnolo. EGF-like domain 7 in the Placenta: expression and role. **IVBM 2012, Wiesbaden, June 2nd-5th 2012. Poster presentation.**

Antonio Pietroiusti, **Micol Massimiani**, Andrea Magrini, Antonio Bergamaschi and Luisa Campagnolo. Low-dose Single Wall Carbon Nanotubes affect embryonic development: an *in vitro* and *in vivo* study. **3rd NanolImpactNet Conference, Lausanne, Switzerland, 14-17 February 2011.**

Second Nanosafety Autumn School. Venice, October 4th-8th, 2010.

22nd Pasteur-Weizmann Symposium. Rome, June 7-9, 2010.

M. Massimiani, A. Pietroiusti, A. Magrini, F. Valentini, G. Palleschi, A. Camaioni, G. Siracusa and L. Campagnolo. Evaluation of SWCNTs embryotoxicity using an *in vitro* model: the EST. **Nanotoxicology 2010, 2nd – 4th June 2010 Edinburgh Napier University, Craiglockhart Campus, Edinburgh. Poster presentation. The Colt Foundation prize for best poster in human toxicology.**

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