

PERSONAL INFORMATION



Valentina Lacconi

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Gender Female

Date of birth 05/08/1991

Nationality Italian

WORK EXPERIENCE

February 2025-Now	RTT at University of Rome Tor Vergata, Department of Biomedicine and Prevention, Histology Section.
July 13-August 3 2024	Visiting at Department of Diagnostic and Therapeutic Systems Engineering, Institute of Biomaterials and Bioengineering (IBB), Tokyo Medical and Dental University (TMDU) to conduct joint research on stem cell-based organoid models of the human placental barrier
April 2024-Now	Guest Editor for “Biomedicines”: Special Issue “Role of Factors in Embryo Implantation and Placental Development”
April 2023-Now	Teaching Fellow in Histology at University of Tirana, Nostra Signora Del Buon Consiglio (Degree in Medicine and Surgery)
October 2021-November 2024	Research Fellow, Post-doctoral at University of Rome Tor Vergata, Department of Biomedicine and Prevention, Histology section.
March 2021-2024	Teaching Fellow in Cytology and Histology at UniCamillus – Saint Camillus International University of Health and Medical Sciences (Degree in Medicine and Surgery; Degree in Dentistry and Dental Prosthetics).
2020-2022	Tutoring activity in Cytology and Histology teaching at the Faculty of Medical Engineering of the University of Rome Tor Vergata.
June 2014-August 2015	Research Scholar at Rheumatology laboratory, Arthritis Center, Boston University, School of Medicine: Scleroderma (Systemic Sclerosis) project .

EDUCATION AND TRAINING

24/5/2023	Training course organized by Istituto Zooprofilattico Sperimentale Lazio and Toscana in collaboration with University of Rome Tor Vergata and Istituto Superiore di Sanità: "Animals used for scientific purposes: Modules 3.2, 6.2 and 8; function a), c) and d) following Dlgs 26/2014, DM 05-08-2021 and DD 18-03-2022". Rattus norvegicus
24/5/2023	Training course organized by Istituto Zooprofilattico Sperimentale Lazio and Toscana in collaboration with University of Rome Tor Vergata and Istituto Superiore di Sanità: "Animals used for scientific purposes: Modules 3.2, 6.2 e 8; funzione a), c) e d), following Dlgs 26/2014, DM 05-08-2021, DD 18-03-2022". Oryctolagus cuniculus
July/November 2022	Training course organized by Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna in: ETICA E CONCEZIONE DEI PROGETTI, MODULI 9, 10, 11, DM 5 AGOSTO 2021
July/November 2022	Training course organized by Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna in: BIOLOGIA E GESTIONE DEGLI ANIMALI DA LABORATORIO, MODULI 3.1, 4, 5, 6.1, 7. DM 5 AGOSTO 2021 RODITORI E LAGOMORFI
May/November 2022	Training course organized by Istituto Zooprofilattico Sperimentale della Lombardia e dell'Emilia Romagna in: LEGISLAZIONE NAZIONALE ED ETICA LIVELLO 1, MODULI 1 E 2, DM 5 AGOSTO 2021
22/2/2022	Acquisition of 12 certified credits in Geology (GEO/05) at E-CAMPUS telematic University.
9/11/2021	Acquisition of 24 certified credits in anthro-psycho-pedagogic topics and in education methods and technologies, at E-CAMPUS telematic University.
June 2021	PhD student in Medical-Surgery Biotechnologies and Translational Medicine – XXXIII cycle at University of Rome Tor Vergata. Thesis title: Characterization of EGFL7 expression during endometrial preparation to implantation and its implications in infertility conditions.
November 2020	Qualification to the profession of Biologist Senior , University of Cagliari.
February 2020	12th Workshop on "3D Advanced <i>In-Vitro</i> Models", Rome.
December 2019	Workshop SIML (Italian Society of Occupational Health) "Rischi per la salute da lavoro e da stili di vita: la medicina di precisione tra potenzialità e prospettive applicative", Milan.
October/November 2019	Training course organized by Istituto Zooprofilattico Sperimentale Lazio and Toscana in collaboration with University of Rome Tor Vergata and CNR: "Welfare of laboratory animals and alternative methods to animal testing".
October 2018	Workshop "Discovering Organoids: The Journey Of 3D Culture Systems" at the University of Rome Tre.
October 2017	Degree in Medical Biotechnologies at the Faculty of Medicine and Surgery of the University of Rome Tor Vergata (Grade: 110/110 cum laude). Thesis title: A novel <i>in vitro</i> model for the study of reproductive toxicity of engineered nanomaterials.

March 2017

Workshop “Human Pluripotent Stem Cell (hPSC)” at the University of Rome Tor Vergata.

2015-2017

Histology and fertilization Laboratory at University of Rome Tor Vergata.

November 2013

Degree in **Biomedical laboratory technician** at the Medical School, University of Rome “La Sapienza” (**Grade: 110/110 cum laude**). Thesis Title: HSP70 inhibition induces “necroptosis” cell death.

Research Activities

Keywords

Implantation
Decidualization
Recurrent implantation Failure
Recurrent pregnancy loss
Placental dysfunction
Stem cells
Nanoparticles, Nanoplastics
<i>In vitro</i> models

Brief Description

My research is currently focused on examining the molecular mechanisms regulating implantation and endometrial stromal cell decidualization. In particular, I’m focusing my attention on two different conditions: recurrent implantation failure and unexplained recurrent pregnancy loss. Besides, I’m studying the toxicological aspects of engineered nanomaterials (ENM) and nanoplastics on placental/foetal development using an *in vitro* model with a co-culture of murine trophoblast and embryonic stem cells and human trophoblast and induced pluripotent stem cells. To this purpose, I’m currently involved in an European project “CHIASMA” and I’ve started an international collaboration with the group of professor Kaji at the Tokyo medical and dentistry University, Department of Diagnostic and Therapeutic Systems Engineering, Institute of Biomaterials and Bioengineering (IBB). I’m also involved in a collaboration with the group of prof. Martinelli, Department of Electronic Engineering, University of Rome Tor Vergata, to develop a microfluidic device mimicking the foetal/maternal interface. In 2014-2015, I carried out research activity as research scholar at Arthritis & Autoimmune Diseases Research Center, Boston University, where I have studied the involvement of Epstein Barr virus in the etiopathogenesis of Systemic Sclerosis Disease (Scleroderma).

PERSONAL SKILLS AND COMPETENCES

Mother tongue(s)

Italian

Other language(s)

English

UNDERSTANDING		SPEAKING		WRITING
Listening	Reading	Spoken interaction	Spoken production	
good	good	good	good	good

Communication skills

▪ good communication skills gained during my experience in a research group in Boston

Organisational /

▪ good organisational skills gained as research scholar at Boston University, responsible for

Technical skills and competences

Western Blot;
Immunofluorescence; ELISA
Flow cytometry;
Immunohistochemistry
Ficoll; Separation of dendritic cells
EBV and HHV8 virus extraction
Cell cultures (immortalized and primary cell lines, including stem cells)
Cell cultures infection; Primary endometrial cell culture and decidualization
3D culture models of placenta barrier and fetus-maternal interface
DNA and RNA isolation
RT-qPCR, RT-PCR and PCR
Bacterial DNA extraction;
Transfection
Histological staining
Use of optical, fluorescence, confocal and inverted microscope
Ability to work with small laboratory animals
Ability to evaluate toxic effects of engineered nanomaterials (silica nanoparticles, zinc and titanium) 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, 11; computer graphics (Adobe Photoshop, SigmaPlot, GraphPad); Office package (Word, Excel, Power-Point)
Knowledge of bioinformatic tools available online e programs for statistics analysis (Sigmastat, Sigmaplot)

Digital competence

SELF-ASSESSMENT				
Information processing	Communication	Content creation	Safety	Problem solving
Basic user	Basic user	Basic user	Basic user	Basic user

Levels: Basic user - Independent user - Proficient user

Digital competences - Self-assessment grid

Driving licence

B

ADDITIONAL INFORMATION

Publications

- Carriero I, **Lacconi V**, Bianco C, Bertani N, Stamme C, Gasperi V, Massimiani M, Maccarrone M, La Sala G, Campagnolo L. Anandamide Impairs Decidualization in Human Endometrial Cells through the NOTCH1 pathway. In submission.
- Filippi J#, **Lacconi V**#, Mencattini A, Massimiani M, Lobresca D, Posanzini G, Riccardi A, Casti P, D'Orazio M, Antonelli G, Curci G, Campagnolo C, Martinelli M. Implantation-on-chip: an AI-based platform for monitoring the embryo trophoblast-endometrial stroma cross-talk with xenobiotics interference. Advanced intelligent systems in submission.
- Filippi J, Casti P, **Lacconi V**, Antonelli G, D'Orazio M, Curci G, Ticconi C, Rago R, De Luca M, Pecora A, Mencattini A, Neale SL, Campagnolo L, Martinelli E. ODEP-Based Robotic System for Micromanipulation and In-Flow Analysis of Primary Cells. *Cyborg Bionic Syst.* 2025 Mar 6;6:0234. doi: 10.34133/cbsystems.0234. PMID: 40391170; PMCID: PMC12087799.
- Lacconi V**, Massimiani M, Antonello G, Gasco P, Bernardini R, Ferrari C, Ippoliti L, La Sala G, Pietroiusti A, Fenoglio I, Riganti C, Campagnolo L. Assessing gut barrier integrity and reproductive performance following pre-mating oral administration of solid-lipid-nanoparticles designed for drug delivery. *Front Toxicol.* 2025 Jan 7;6:1508598. doi: 10.3389/ftox.2024.1508598. PMID: 39839550; PMCID: PMC11746049.
- Stampone E, Bencivenga D, Dessi L, Sarnelli S, Campagnolo L, **Lacconi V**, Della Ragione F, Borriello A. p57Kip2 phosphorylation modulates its localization, stability, and Interactions. *nt J Mol Sci.* 2024 Oct 17;25(20):11176. doi: 10.3390/ijms252011176. PMID: 39456957; PMCID: PMC11508627.
- Campagnolo L, **Lacconi V**, Filippi J, Martinelli E. Twenty years of in vitro nanotoxicology: how AI could make the difference. *Front Toxicol.* 2024 Sep 18;6:1470439. doi: 10.3389/ftox.2024.1470439. PMID: 39376973; PMCID: PMC11457712.
- Salvi S, Fruci S, **Lacconi V**, Totaro F, Rullo R, Stuhlmann H, Lanzone A, Campagnolo L, Massimiani M. Effect of Pravastatin on placental expression of EGFL7 in early-onset preeclampsia: a new potential mechanism of action. *Biomedicines*, *Biomedicines* 2024, 12, 1929, <https://doi.org/10.3390/biomedicines12081929>
- Antonelli G, Curci G, Filippi J, Bernardini A, Menegazzo M, Marini M, Agresti A, Pescetelli S, **Lacconi V**, Massimiani M, D'Orazio M, Casti P, Campagnolo L, Bussetti G, Mencattini A, Martinelli E. Laser-induced graphene wet transfer technique for lab-on-chip applications. *Sensors and Actuators A: Physical*, Volume 377, 2024, 115746, ISSN 0924-4247, <https://doi.org/10.1016/j.sna.2024.115746>.
- Lacconi V**, Massimiani M, Carriero I, Bianco C, Ticconi C, Pavone V, Alteri A, Muzii L, Rago R, Pisaturo V, et al. When the Embryo Meets the Endometrium: Identifying the Features Required for Successful Embryo Implantation. *International Journal of Molecular Sciences*.

2024; 25(5):2834. <https://doi.org/10.3390/ijms25052834>

Campagnolo L, **Lacconi V**, Bernardini R, Viziano A, Pietroiusti A, Ippoliti L, Moleti A, Sisto R. Maternal exposure to zinc oxide nanoparticles causes cochlear dysfunction in the offspring. *Front Toxicol*. 2024 Jan 11;6:1323681. doi: 10.3389/ftox.2024.1323681. PMID: 38283866; PMCID: PMC10812106.

Antonelli G, Mencattini A, Massimiani M, **Lacconi V**, Filippi J, Losardo M, D'Orazio M, Casti P, Bragaglia M, Curci G, Nanni F, Campagnolo L, Martinelli E. Development of integrated optical biosensors based on low-cost stereolithography fabrication and multispectral signature for Lab-On-Chip applications. *Sensors and Actuators B: Chemical* Volume 401, 15 February 2024, 135009. doi.org/10.1016/j.snb.2023.135009.

Lacconi V, Massimiani M, Paglione L, Antonaci D, Meneghini C, Klinger FG, Fazleabas A, Stuhlmann H, Rago R, Ticconi C, Campagnolo L. Characterization of EGFL7 expression in normal endometrium and in the endometrium of women with poor reproductive outcomes. *Hum Reprod*. 2023 May 9:dead086. doi: 10.1093/humrep/dead086. Epub ahead of print. PMID: 37159518.

Ciocca M, Marcozzi S, Mariani P, **Lacconi V**, Di Carlo A, Cinà, L, D. Rosato-Siri M, Zanon A, Cattelan G, Avancini E, Lugli P, Priya S, Camaioni A, Brown T.M. A Polymer Bio–Photoelectrolytic Platform for Electrical Signal Measurement and for Light Modulation of Ion Fluxes and Proliferation in a Neuroblastoma Cell Line. *Advanced Nanobiomed Research*. 2023 February 5. <https://doi.org/10.1002/anbr.202200127>.

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 feto-maternal interface to study developmental effects of potentially toxic compounds: The example of titanium dioxide nanoparticles. *Toxicol Appl Pharmacol*. 2022 May 9;446:116056. doi: 10.1016/j.taap.2022.116056. Epub ahead of print. PMID: 35537546.

Manna C, **Lacconi V**, Rizzo G, De Lorenzo A, Massimiani M. Placental Dysfunction in Assisted Reproductive Pregnancies: Perinatal, Neonatal and Adult Life Outcomes. *Int J Mol Sci*. 2022;23(2):659. Published 2022 Jan 8.

Camaioni A, Massimiani M, **Lacconi V**, Magrini A, Salustri A, Sotiriou GA, Singh D, Bitounis D, Bocca B, Pino A, Barone F, Prota V, Iavicoli I, Scimeca M, Bonanno E, Cassee FR, Demokritou P, Pietroiusti A, Campagnolo L. Silica encapsulation of ZnO nanoparticles reduces their toxicity for cumulus cell-oocyte-complex expansion. *Part Fibre Toxicol*. 2021 Sep 3;18(1):33. doi: 10.1186/s12989-021-00424-z. PMID: 34479598

Massimiani M, Tiralongo GM, Salvi S, Fruci S, **Lacconi V**, La Civita F, Mancini M, Stuhlmann H, Valensise H, Campagnolo L. 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*. 2020 Aug 9:S1931-5244(20)30198-5

	Massimiani M, Lacconi V, La Civita F, Ticconi C, Rago R, Campagnolo L. Molecular Signaling Regulating Endometrium-Blastocyst Crosstalk. Int J Mol Sci. 2019 Dec 18 Bianchi MG, Campagnolo L, Allegri M, Ortelli S, Blosi M, Chiu M, Taurino G, Lacconi V, Pietroiusti A, Costa AL, Poland CA, Baird D, Duffin R, Bussolati O, Bergamaschi E. Length-dependent toxicity of TiO(2) nanofibers: mitigation via shortening. Nanotoxicology. 2019 Nov 15 Farina A, Peruzzi G, Lacconi V, Lenna S, Quarta S, Rosato E, Vestri AR, York M, Dreyfus DH, Faggioni A, Morrone S, Trojanowska M, Farina GA. Epstein-Barr virus lytic infection promotes activation of Toll-like receptor 8 innate immune response in systemic sclerosis monocytes. Arthritis Res Ther. 2017 Santarelli R, Granato M, Pentassuglia G, Lacconi V, Gilardini Montani MS, Gonnella R, Tafani M, Torrisi MR, Faggioni A, Cirone M. “KSHV reduces autophagy in THP-1 cells and in differentiating monocytes by decreasing CAST/calpastatin and ATG5 expression”, Autophagy. 2016 Oct 7 Granato M, Lacconi V, Peddis M, Di Renzo L, Valia S, Rivanera D, Antonelli G, Frati L, Faggioni A, Cirone M. “Hepatitis C virus present in the sera of infected patients interferes with the autophagic process of monocytes impairing their in-vitro differentiation into dendritic cells”, Biochim Biophys Acta. 2014 Jul Granato M, Lacconi V, Peddis M, Lotti LV, Renzo LD, Gonnella R, Santarelli R, Trivedi P, Frati L, D'Orazi G, Faggioni A, Cirone M. “HSP70 inhibition by 2-phenylethynesulfonamide induces lysosomal cathepsin D release and immunogenic cell death in primary effusion lymphoma”, Cell Death Dis. 2013
National and International conferences	Lacconi V, Filippi J, Martinelli E and Campagnolo L. Modelling <i>in vitro</i> the foetal-maternal interface. Sessione Scientifica Collegio degli Istologi, Napoli, 20-21 Febbraio 2025. <u>Oral Presentation</u> Lacconi V, Carriero I, Massimiani M, Rago R, Ticconi C and Campagnolo L. Ruolo del fattore secreto EGF-like domain multiple 7 (EGFL7) nella preparazione dell'endometrio all'impianto. SIERR X National Congress “IVFuture learning from the past, heading to the future”, Rome, 14-16 March 2024. <u>Oral poster presentation and reward best oral poster's winner</u> Lacconi V, Massimiani M and Campagnolo L. Characterization of epidermal growth factor-like domain 7 (EGFL7) expression in normal endometrium and in the endometrium of women with poor reproductive outcomes. Congresso SIAI, Modena, 11-13 September 2023. <u>Poster</u> Lacconi V, Massimiani M, La Civita F and Campagnolo L. Characterization of Epidermal Growth Factor Like Domain 7 (EGFL7) expression and its potential involvement in

	endometrial receptivity. Congresso SIAI, Padova, 14-16 September 2022. <u>Oral presentation</u> Lacconi V, Massimiani M, La Civita F, Camaioni A and Campagnolo L. Characterization of Epidermal Growth Factor Like Domain 7 (EGFL7) expression and its potential involvement in endometrial receptivity. Sessione Scientifica Collegio degli Istologi, Via Scarpa, Rome, 25 February 2022. <u>Oral presentation and Reward Monesi-Rizzoli's winner</u> Massimiani M, Lacconi V, Salustri A, Bocca B, Barone F, Scimeca M, Demokritou P, Camaioni A and Campagnolo L. Silica Encapsulation of ZnO nanoparticles reduces their toxicity for cumulus cell-oocyte maturation. Sessione Scientifica Collegio degli Istologi, Via Scarpa, Rome, 26 October 2020. Oral presentation Lacconi V, Massimiani M, Rago R, Ticconi C and Campagnolo L. The secreted factor Epidermal Growth Factor Like Domain 7 (EGFL7): a potential regulator of endometrial receptivity. Sessione Scientifica Collegio degli Istologi, Via Scarpa, Rome, 26 October 2020. <u>Oral presentation</u> Campagnolo L, Lacconi V, La Civita F, Antonaci D, Meneghini C, Massimiani M, Ticconi C, Rago R. The EGFL7/NOTCH pathway: a novel regulator of the endometrium-blastocyst dialog. 35th Annual meeting on ESHRE, Vienna, Austria, 23-26 June 2019. Poster. 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". 3RS Winter school: Oltre le barriere... modelli in vitro per la tossicologia, IZSLER 27 November 2017, Brescia, <u>Oral presentation</u>. Lacconi V, Massimiani M and Campagnolo L. In vitro models for the study of reproductive toxicity of engineered nanomaterials. "Nanoinnovation 2017" San Pietro in Vincoli, Rome, September 26-29, 2017. Sapienza University of Rome –Faculty of civil and industrial engineering. <u>Oral presentation</u>.
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Personal data

I hereby authorize the use of my personal data in accordance to the GDPR 679/16 - "European regulation on the protection of personal data".

Everything stated in this CV corresponds to the truth pursuant to articles 46 and 47 of the P.D.R. 445/2000