

## Francesca Ietta

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### RESEARCH INTEREST

- Human trophoblast differentiation and function.
- Effects of hormones-like environmental chemicals on human placenta functions.
- Effects of infections on human placenta functions.
- Placenta and cardiovascular development.
- Molecules involved in placentation of mammals and viviparous vertebrates.

### POSITIONS

Associate Professor in Physiology, Department of Life Sciences, University of Siena, since April 2016;

Researcher in Physiology, Department of Life Sciences, University of Siena, 2008-2016

Visiting researcher at Institute of Biomedical Sciences, Federal University of Uberlandia, Brazil, October 2013- August 2015.

Post-Doc “Role of proinflammatory cytokines at the fetal/maternal interface” Department of Physiology, University of Siena, 2005-2008.

PhD student in Cellular Physiology and Neuro-immunophysiology, Department of Physiology, University of Siena, October 2001-March 2004

Visiting PhD student at Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, ON, Canada; SickKids Research Institute, Department of Physiology and Experimental Medicine, Toronto, ON, Canada, January - July 2002; November 2002-December 2003.

Visiting PhD student Samuel Lunenfeld Research Institute, Mount Sinai Hospital, Toronto, ON, Canada; January -February 2001

Research fellowship, Department of Physiology, University of Siena, February 1999-November 2000 and March 2004 -August 2007.

### EDUCATION AND TRAINING

PhD Student in Cellular Physiology and Neuro-immunophysiology, Department of Physiology, University of Siena, October 2001-2003 (PhD achieved in March 23, 2004, title “Macrophage Migration Inhibitory Factor, MIF, in human placenta: expression and role”).

Graduation in Biological Sciences, University of Siena (110/110 cum laude) March 12th, 1998

## **POSITIONS OF RESPONSABILITY**

- Evaluation member for EU, Marie Skłodowska-Curie Individual Fellowships H2020- MSCA-IF-2019 -European & Global Fellowships
- From 2016 Professor of Doctorate School in "Life Sciences", University of Siena
- Reviewer of the Italian MIUR for National proposals
- Reviewer of the French National Research Agency (ANR)
- Official Opponent in the Doctorate school of Physiological and Nutritional Sciences, University of Florence, Italy, April 2012
- Professor of the Doctorate School in "Molecular and Cellular Physiology, Pharmacology and Toxicology", University of Siena
- Member of the Editorial Board in cell biology field of Scientific Reports.

## **TEACHING ACTIVITIES:**

2008-2010 Systems Physiology, Faculty of Biological Sciences, University of Siena

2007-2008 General and Animal Physiology, Faculty of Biological Sciences, University of Siena

2008-2012 Molecular Biology of Implantation, Faculty of Biological Sciences, University of Siena.

2013-14; 2014-15; 2015-16; 2016-2017; 2017-2018; 2018-2019; 2019-2020 Endocrinology, Biological Sciences, University of Siena.

2016-2017; 2016-2017; 2017-2018; 2018-2019; 2019-2020 Physio- Endocrinology of Reproduction, Biological Sciences, University of Siena

2016-2017 General Physiology, Natural Sciences, University of Siena

2008- Tutorship for undergraduate and graduate students

## **REFEREE ACTIVITY**

Molecular Human Reproduction

Biology of Reproduction

Reproductive Biology and Endocrinology

Placenta

Journal of Cellular Physiology

Scientific Reports

## **CONGRESS PARTICIPATION AS INVITED SPEAKER**

“Glycodelin at the maternal fetal interface” FEPS-SIF 2019, Joint meeting of the Federation of European Physiological Societies and the Italian Physiological Society, 10-13 September 2019, Bologna Italy.

“The Glycodelin A in human placenta”, Symposium THE EARLY LIFE, 16 August 2018, University of Siena, Siena, Italy.

“Functional participation of Macrophage Migration Inhibitory Factor (MIF) in human pregnancy” International Congress of Basic Health Science, Workshop Applied Physiology, 8 August 2014 Uberlandia, Brazil.

“Macrophage migration Inhibitory Factor: a pro-inflammatory cytokine in human pregnancy” Programa de Pos-Graduacao em Biologia Celular e Estrutural Aplicada, 15 April 2014, Universidade Federal de Uberlandia, Uberlandia, Brazil.

“Evidence of trophoblast target cells for the cytokine MIF (Macrophage Migration Inhibitory Factor) in human placenta”. The V Latin American Symposium on Maternal-Fetal Interaction and

Placenta and IV Latin American Symposium on Reproductive Immunology, Iguazu Falls, Parana, Brazil, 18 to 20 February 2013.

“Human Placentation”. Biology of Reproduction Workshop, Siena, Italy, 29 November 2010.

“Regulation of ATP- binding cassette transporter A1 (ABCA1) by para-nonylphenol in first trimester human placenta”. ABC transport proteins in environmental health and toxicology International Conference, Certosa di Pontignano, Siena, Italy, 18-21 October 2007.

“Regulation of MIF: the never-ending oxygen story” workshop: oxygen and trophoblast behaviour, 9th meeting of the International Federation of Placenta Associations, Mainz, Germany, 24-27 September 2003

#### RESEARCH GRANTS

- 2019 FISM, Fondazione Italiana Sclerosi Multipla, “The role of RANK-RANKL-OPG axis in Multiple Sclerosis: a pilot study”, Principal Investigator
- 2014-2016 Regione Toscana, “F.A.T.E.Pre.Sco” (Research assistant).
- 2013-2015 Science without Borders, Modalidade Atração de Jovens Talentos “Interaction between macrophages and trophoblast human cells: influence of *Toxoplasma gondii*”: scholarship for "Young Talent Attraction".
- 2008 PRIN, vice Principal Investigator.
- 2006 Reprotect, 6<sup>th</sup> Programma Quadro Unione Europea “Workpackage II, IMPLANTATION”: head of the laboratory for trophoblast differentiation.
- 2006 Fondazione Monte dei Paschi di Siena, Research assistant (expert on trophoblast in vitro models).
- 2006 Regione Toscana, Research assistant (Expert on trophoblast in vitro models).
- 2003 PRIN, Research assistant.

#### MAIN NATIONAL AND INTERNATIONAL COLLABORATION

- Isabella Caniggia, Department of Obstetrics, Gynaecology and Physiology, University of Toronto, Canada
- Eloisa Amália Vieira Ferro, Universidade Federal de Uberlândia, Instituto de Ciências Biomédicas, Uberlândia MG, Brazil
- Estela Bevilacqua, Institute of Biomedical Sciences, University of São Paulo, Brazil
- Vibeke Dantzer, Faculty of Life Sciences (LIFE), University of Copenhagen, Denmark

#### PEER REVIEW ARTICLES

1. Benincasa L, Mandalà M, Paulesu L, Barberio L, Ietta F. Prenatal Nutrition Containing Bisphenol A Affects Placenta Glucose Transfer: Evidence in Rats and Human Trophoblast. *Nutrients*. 2020 May 11;12(5):E1375. doi: 10.3390/nu12051375.

2. Narciso L, Ietta F, Romagnoli R, Paulesu L, Mantovani A, Tait S. Effects of Bisphenol A on endogenous retroviral envelopes expression and trophoblast fusion in BeWo cells. *Reprod Toxicol.* 2019 Oct;89:35-44. doi:10.1016/j.reprotox.2019.07.001. 1:
3. Franco PS, Gois PSG, de Araújo TE, da Silva RJ, de Freitas Barbosa B, de Oliveira Gomes A, Ietta F, Dos Santos LA, Dos Santos MC, Mineo JR, Ferro EAV. Brazilian strains of *Toxoplasma gondii* are controlled by azithromycin and modulate cytokine production in human placental explants. *J Biomed Sci.* 2019 Jan 21;26(1):10. doi: 10.1186/s12929-019-0503-3.
4. Milian ICB, Silva RJ, Manzan-Martins C, Barbosa BF, Guirelli PM, Ribeiro M, de Oliveira Gomes A, Ietta F, Mineo JR, Silva Franco P, Ferro EAV. Increased *Toxoplasma gondii* Intracellular Proliferation in Human Extravillous Trophoblast Cells (HTR8/SVneo Line) Is Sequentially Triggered by MIF, ERK1/2, and COX-Front *Microbiol.* 2019 Apr 24;10:852. doi: 10.3389/fmicb.2019.00852.
5. Ietta F, Ferro EAV, Bevilacqua E, Benincasa L, Maioli E, Paulesu L. Role of the Macrophage Migration Inhibitory Factor (MIF) in the survival of first trimester human placenta under induced stress conditions. *Sci Rep.* 2018 Aug 14;8(1):12150. doi: 10.1038/s41598-018-29797-6.
6. de Oliveira Cardoso MF, Moreli JB, Gomes AO, de Freitas Zanon C, Silva AE, Paulesu LR, Ietta F, Mineo JR, Ferro EA, Oliani SM. Annexin A1 peptide is able to induce an anti-parasitic effect in human placental explants infected by *Toxoplasma gondii*. *Microb Pathog.* 2018 Oct;123:153-161. doi: 10.1016/j.micpath.2018.07.005. Epub 2018 Jul 9.
7. Maioli E, Daveri E, Maellaro E, Ietta F, Cresti L, Valacchi G. Non-conventional rottlerin anticancer properties. *Arch Biochem Biophys.* 2018 May 1;645:50-53. doi: 10.1016/j.abb.2018.03.009.
8. Paulesu L, Rao CV, Ietta F, Pietropolli A, Ticconi C. hCG and Its Disruption by Environmental Contaminants during Human Pregnancy. *Int J Mol Sci.* 2018 Mar 20;19(3). pii: E914. doi: 10.3390/ijms19030914.
9. Verratti V, Ietta F, Paulesu L, Romagnoli R, Ceccarelli I, Doria C, Fanò Illic G, Di Giulio C, Aloisi AM. Physiological effects of high-altitude trekking on gonadal, thyroid hormones and macrophage migration inhibitory factor (MIF) responses in young lowlander women. *Physiol Rep.* 2017 Nov;5(20). pii: e13400. doi: 10.14814/phy2.13400.
10. Ribeiro M, Franco PS, Lopes-Maria JB, Angeloni MB, Barbosa BF, Gomes AO, Castro AS, Silva RJD, Oliveira FC, Milian ICB, Martins-Filho OA, Ietta F, Mineo JR, Ferro EAV. Azithromycin treatment is able to control the infection by two genotypes of *Toxoplasma gondii* in human trophoblast BeWo cells. *Exp Parasitol.* 2017 Oct;181:111-118. doi: 10.1016/j.exppara.2017.08.004.
11. Ietta F, Maioli E, Daveri E, Gonzaga Oliveira J, da Silva RJ, Romagnoli R, Cresti L, Maria Avanzati A, Paulesu L, Barbosa BF, Gomes AO, Roberto Mineo J, Ferro EAV. Rottlerin-mediated inhibition of *Toxoplasma gondii* growth in

- BeWo trophoblast-like cells. *Sci Rep.* 2017 Apr 28;7(1):1279. doi: 10.1038/s41598-017-01525-6.
12. Daveri E, Maellaro E, Valacchi G, Ietta F, Muscettola M, Maioli E. Inhibitions of mTORC1 and 4EBP-1 are key events orchestrated by Rottlerin in SK-Mel-28 cell killing. *Cancer Lett.* 2016 Jun 22;380(1):106-113. doi: 10.1016/j.canlet.2016.06.018.
  13. Costa AF, Gomes SZ, Lorenzon-Ojea AR, Martucci M, Faria MR, Pinto Ddos S Jr, Oliveira SF, Ietta F, Paulesu L, Bevilacqua E. Macrophage migration inhibitory factor induces phosphorylation of Mdm2 mediated by phosphatidylinositol 3-kinase/Akt kinase: Role of this pathway in decidual cell survival. *Placenta.* 2016 May;41:27-38. doi: 10.1016/j.placenta.2016.03.001.
  14. Cameli M, Righini FM, Sparla S, Tacchini D, Dokollari A, Sassi CG, Di Tommaso C, Curci V, Censini S, Incampo E, Cassano F, Droandi G, Bernazzali S, Focardi M, Ietta F, Sartiani L, Romagnoli R, Marotta G, Mugelli A, Paulesu L, Sani G, Tanganelli P, Maccherini M, Mondillo S. First Evidence of Cardiac Stem Cells From the Left Ventricular Apical Tip in Patients With Left Ventricular Assist Device Implantation. *Transplant Proc.* 2016 Mar; 48(2):395-8. doi:10.1016/j.transproceed.2015.12.045.
  15. Sieppi E, Vähäkangas K, Rautio A, Ietta F, Paulesu L, Myllynen P. The xenoestrogens, bisphenol A and para-nonylphenol, decrease the expression of the ABCG2 transporter protein in human term placental explant cultures. *Mol Cell Endocrinol.* 2016 Jul 5;429:41-9. doi: 10.1016/j.mce.2016.03.034.
  16. Mannelli C, Ietta F, Avanzati AM, Skarzynski D, Paulesu L. Biological Tools to Study the Effects of Environmental Contaminants at the Feto-Maternal Interface. Dose Response. 2015 Nov 12;13(4):1559325815611902. doi: 10.1177/1559325815611902. eCollection 2015 Oct-Dec. Review.
  17. Guirelli PM, Angeloni MB, Barbosa BF, Gomes AO, Castro AS, Franco PS, Silva RJ, Oliveira JG, Martins-Filho OA, Mineo JR, Ietta F, Ferro EA. Trophoblast-macrophage crosstalk on human extravillous under *Toxoplasma gondii* infection. *Placenta.* 2015 Aug 21. pii: S0143-4004(15)30036-9. doi:10.1016/j.placenta.2015.08.009.
  18. Mannelli C, Szóstek AZ, Lukasik K, Carotenuto C, Ietta F, Romagnoli R, Ferretti C, Paulesu L, Wołczynski S, Skarzynski DJ. Bisphenol A modulates receptivity and secretory function of human decidual cells: an in vitro study. *Reproduction.* 2015 Aug;150(2):115-25. doi: 10.1530/REP-14-0601.
  19. Corallo C, Paulesu L, Cutolo M, Ietta F, Carotenuto C, Mannelli C, Romagnoli R, Nuti R, Giordano N. Serum levels, tissue expression and cellular secretion of macrophage migration inhibitory factor in limited and diffuse systemic sclerosis. *Clin Exp Rheumatol.* 2015 Jul-Aug;33 Suppl 91(4):98-105.
  20. Franco PS, da Silva NM, de Freitas Barbosa B, de Oliveira Gomes A, Ietta F, Shwab EK, Su C, Mineo JR, Ferro EA. *Calomys callosus* chronically infected by *Toxoplasma gondii* clonal type II strain and reinfected by Brazilian strains is not

- able to prevent vertical transmission. *Front Microbiol.* 2015 Mar 10;6:181. doi: 10.3389/fmicb.2015.00181.
21. Barbosa BF, Lopes-Maria JB, Gomes AO, Angeloni MB, Castro AS, Franco PS, Fermino ML, Roque-Barreira MC, Ietta F, Martins-Filho OA, Silva DA, Mineo JR, Ferro EA. IL10, TGF beta1, and IFN gamma modulate intracellular signaling pathways and cytokine production to control *Toxoplasma gondii* infection in BeWo trophoblast cells. *Biol Reprod.* 2015 Mar;92(3):82. doi: 10.1095/biolreprod.114.124115.
  22. Torricelli C, Daveri E, Salvadori S, Valacchi G, Ietta F, Muscettola M, Carlucci F, Maioli E. Phosphorylation-independent mTORC1 inhibition by the autophagy inducer Rottlerin. *Cancer Lett.* 2015 Apr 28;360(1):17-27. doi: 10.1016/j.canlet.2015.01.040.
  23. Spagnoletti A, Paulesu L, Mannelli C, Ermini L, Romagnoli R, Cintorino M, Ietta F. Low concentrations of Bisphenol A and para-Nonylphenol affect extravillous pathway of human trophoblast cells. *Mol Cell Endocrinol.* 2015 Sep 5;412:56-64. doi: 10.1016/j.mce.2015.05.023.
  24. Bevilacqua E, Paulesu L, Ferro EA, Ietta F, Faria MR, Lorenzon AR, Costa AF, Martucci M. Review: putative roles for the macrophage migratory inhibitory factor at the maternal fetal interface. *Placenta.* 2014 Feb;35 Suppl:S51-6.
  25. Barbosa BF, Paulesu L, Ietta F, Bechi N, Romagnoli R, Gomes AO, Favoreto-Junior S, Silva DA, Mineo JR, Mineo TW, Ferro EA. Susceptibility to *Toxoplasma gondii* proliferation in BeWo human trophoblast cells is dose-dependent of macrophage migration inhibitory factor (MIF), via ERK1/2 phosphorylation and prostaglandin E2 production. *Placenta.* 2014 Mar;35(3):152-62.
  26. Cardaropoli S, Ietta F, Romagnoli R, Rolfo A, Paulesu L, Todros T. Lower macrophage migration inhibitory factor concentrations in maternal serum before pre-eclampsia onset. *J Interferon Cytokine Res.* 2014 Jul;34(7):537-42.
  27. Mannelli C, Ietta F, Carotenuto C, Romagnoli R, Szostek AZ, Wasniewski T, Skarzynski DJ, Paulesu L. Bisphenol A alters  $\beta$ -hCG and MIF release by human placenta: an in vitro study to understand the role of endometrial cells. *Mediators Inflamm.* 2014;2014:635364.
  28. Ermini L, Bhattacharjee J, Spagnoletti A, Bechi N, Aldi S, Ferretti C, Bianchi L, Bini L, Rosati F, Paulesu L, Ietta F. Oxygen governs Gal $\beta$ 1-3GalNAc epitope in human placenta. *Am J Physiol Cell Physiol.* 2013 Nov 1;305(9):C931-40.
  29. Bechi N, Sorda G, Spagnoletti A, Bhattacharjee J, Vieira Ferro EA, de Freitas Barbosa B, Frosini M, Valoti M, Sgaragli G, Paulesu L, Ietta F. Toxicity assessment on trophoblast cells for some environment polluting chemicals and 17 $\beta$ -estradiol. *Toxicol In Vitro.* 2013 Apr;27(3):995-1000.

30. Paulesu L, Pfarrer C, Romagnoli R, Ietta F, Callesen H, Hambruch N, Dantzer V. Variation in macrophage migration inhibitory factor [MIF] immunoreactivity during bovine gestation. *Placenta*. 2012 Mar;33(3):157-63.
31. Lorenzetti S, Altieri I, Arabi S, Balduzzi D, Bechi N, Cordelli E, Galli C, Ietta F, Modina SC, Narciso L, Pacchierotti F, Villani P, Galli A, Lazzari G, Luciano AM, Paulesu L, Spanò M, Mantovani A. Innovative non-animal testing strategies for reproductive toxicology: the contribution of Italian partners within the EU project ReProTect. *Ann Ist Super Sanita*. 2011;47(4):429-44.
32. Cardaropoli S, Paulesu L, Romagnoli R, Ietta F, Marzioni D, Castellucci M, Rolfo A, Vasario E, Piccoli E, Todros T. Macrophage migration inhibitory factor in fetoplacental tissues from preeclamptic pregnancies with or without fetal growth restriction. *Clin Dev Immunol*. 2012;2012:639342
33. Jantra S, Paulesu L, Lo Valvo M, Lillo F, Ietta F, Avanzati AM, Romagnoli R, Bechi N, Brizzi R. Cytokine components and mucosal immunity in the oviduct of *Xenopus laevis* (amphibia, pipidae). *Gen Comp Endocrinol*. 2011 Sep 15;173(3):454-60.
34. Paulesu L, Bhattacharjee J, Bechi N, Romagnoli R, Jantra S, Ietta F. Pro-Inflammatory Cytokines in Animal and Human Gestation. *Curr Pharm Des*. 2010 Oct 27.
35. Rolfo A, Many A, Racano A, Tal R, Tagliaferro A, Ietta F, Wang J, Post M, Caniggia I. Abnormalities in oxygen sensing define early and late onset preeclampsia as distinct pathologies. *PLoS One*. 2010 Oct 12;5(10):e13288.
36. Bhattacharjee J, Ietta F, Bechi N, Romagnoli R, Paulesu L. Localisation of ABCA1 in first trimester and term placental tissues--a reply. *Placenta*. 2010 Oct;31(10):941.
37. Faria MR, Hoshida MS, Ferro EA, Ietta F, Paulesu L, Bevilacqua E. Spatiotemporal patterns of macrophage migration inhibitory factor (Mif) expression in the mouse placenta. *Reprod Biol Endocrinol*. 2010 Aug 4;8:95.
38. Bhattacharjee J, Ietta F, Giacomello E, Bechi N, Romagnoli R, Fava A, Paulesu L. Expression and localization of ATP binding cassette transporter A1 (ABCA1) in first trimester and term human placenta. *Placenta*. 2010 May;31(5):423-30.
39. Mørck TJ, Sorda G, Bechi N, Rasmussen BS, Nielsen JB, Ietta F, Rytting E, Mathiesen L, Paulesu L, Knudsen LE. Placental transport and in vitro effects of Bisphenol A. *Reprod Toxicol*. 2010 Aug;30(1):131-7.
40. Bechi N, Ietta F, Romagnoli R, Jantra S, Cencini M, Galassi G, Serchi T, Corsi I, Focardi S, Paulesu L. Environmental Levels of para-Nonylphenol Are Able to Affect Cytokine Secretion in Human Placenta. *Environ Health Perspect*. 2010, 118: 427-31.
41. Ietta F, Bechi N, Romagnoli R, Bhattacharjee J, Realacci M, Di Vito M, Ferretti C, Paulesu L. 17{beta}-Estradiol modulates the macrophage migration inhibitory

- factor secretory pathway by regulating ABCA1 expression in human first-trimester placenta. *Am J Physiol Endocrinol Metab.* 2010, 298: E411-8
42. Paulesu L, Jantra S, Ietta F, Brizzi R, Bigliardi E. Interleukin-1 in reproductive strategies. *Evol Dev.* 2008, 10: 778-88.
  43. Ferro EA, Mineo JR, Ietta F, Bechi N, Romagnoli R, Silva DA, Sorda G, Bevilacqua E, Paulesu LR. Macrophage migration inhibitory factor is up-regulated in human first-trimester placenta stimulated by soluble antigen of *Toxoplasma gondii*, resulting in increased monocyte adhesion on villous explants. *Am J Pathol.* 2008, 172: 50-8.
  44. Zamudio S, Wu Y, Ietta F, Rolfo A, Cross A, Wheeler T, Post M, Illsley NP, Caniggia I. Human placental hypoxia-inducible factor-1alpha expression correlates with clinical outcomes in chronic hypoxia in vivo. *Am J Pathol.* 2007, 170: 2171-9.
  45. Jantra S, Bigliardi E, Brizzi R, Ietta F, Bechi N, Paulesu L. Interleukin 1 in oviductal tissues of viviparous, oviparous, and ovuliparous species of amphibians. *Biol Reprod.* 2007, 76:1009-15.
  46. Ietta F, Wu Y, Romagnoli R, Soleymanlou N, Orsini B, Zamudio S, Paulesu L, Caniggia I. Oxygen regulation of macrophage migration inhibitory factor in human placenta. *Am J Physiol Endocrinol Metab.* 2007, 292: E272-80.
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  48. Zicari A, Ticconi C, Ietta F, Belmonte A, Bechi N, Realacci M, Di Vito M, Arcuri F, Russo M, Piccione E, Paulesu L. Macrophage migration inhibitory factor-nitric oxide interaction in human fetal membranes at term pregnancy. *J Soc Gynecol Investig.* 2006, 13: 263-70.
  49. Ietta F, Wu Y, Winter J, Xu J, Wang J, Post M, Caniggia I. Dynamic HIF1A regulation during human placental development. *Biol Reprod.* 2006, 75: 112-21.
  50. Paulesu L, Ietta F, Petraglia F. Feto-maternal biology and ethics of human society. *Reprod Biol Endocrinol.* 2005, 18;3:55.
  51. Paulesu L, Bigliardi E, Paccagnini E, Ietta F, Cateni C, Guillaume CP, Heulin B. Cytokines in the oviparity/viviparity transition: evidence of the interleukin-1 system in a species with reproductive bimodality, the lizard *Lacerta vivipara*. *Evol Dev.* 2005, 7: 282-8.
  52. Todros T, Bontempo S, Piccoli E, Ietta F, Romagnoli R, Biolcati M, Castellucci M, Paulesu L. Increased levels of macrophage migration inhibitory factor (MIF) in preeclampsia. *Eur J Obstet Gynecol Reprod Biol.* 2005, 123:162-6.



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54. Aloisi AM, Pari G, Ceccarelli I, Vecchi I, Ietta F, Lodi L, Paulesu L. Gender-related effects of chronic non-malignant pain and opioid therapy on plasma levels of macrophage migration inhibitory factor (MIF). *Pain.* 2005, 115: 142-51.
55. Soleymanlou N, Wu Y, Wang JX, Todros T, Ietta F, Jurisicova A, Post M, Caniggia I. A novel Mtd splice isoform is responsible for trophoblast cell death in pre-eclampsia. *Cell Death Differ.* 2005, 12:441-52.
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57. Selvi E, Tripodi SA, Catenaccio M, Lorenzini S, Chindamo D, Manganeli S, Romagnoli R, Ietta F, Miracco C, Cintonino M, Marcolongo R Expression of macrophage migration inhibitory factor in diffuse systemic sclerosis.. *Ann Rheum Dis.* 2003,62: 460-464.
58. Ietta F, Todros T, Ticconi C, Piccoli E, Zicari A, Piccione E, Paulesu L Macrophage migration inhibitory factor in human pregnancy and labor. *L. Am J Reprod Immunol.* 2002, 48: 404-409
59. Cintonino M, Tripodi SA, Romagnoli R, Ietta F, Ricci MG, Paulesu L Interferons and their Receptors in Human Papillomavirus Lesions of the Uterine Cervix.. *European Journal of Gynaecological Oncology.* 2002, 23: 145-150
60. Magi B, Ietta F, Romagnoli R, Liberatori S, Pallini V, Bini L, Tripodi SA, Cintonino M, Chellini F, Arcuri F, De Felice C, Paulesu L Presence of Macrophage Migration Inhibitory Factor in human milk: evidence in the aqueous phase and milk fat globules.. *Pediat. Res.* 2002, 51: 619-624.
61. Arcuri F, Ricci C, Ietta F, Cintonino M, Tripodi SA, Cetin I, Garzia E, Schatz F, Lemi P, Santopietro R, Paulesu L Macrophage Migration Inhibitory Factor in human endometrium: Expression and localization during the menstrual cycle and early pregnancy. *Biology of Reproduction* 2001, 64: 1200-1205.

#### BOOK CHAPTERS

***ABC transporters in human placenta and their role in maternal-fetal cholesterol transfer: ABCA1 candidate target.*** Bhattacharjee J, **Ietta F**, Romagnoli R, Bechi N, Caniggia I, Paulesu L (2012). In: -. Recent advances in research on the human placenta. p. 335-354, Rijeka:Jing Zheng, Intech, ISBN: 9789535101949

***Cytokine signals in placental viviparity*** Paulesu L, Cateni C, Romagnoli R, **Ietta F**, Bechi N, Bigliardi E. - In: L.Paulesu (Editor). *SIGNAL MOLECULES IN ANIMAL AND HUMAN GESTATION. Research Signpost, Trivandrum, Kerala, India, (2004) pp:87-94.*

***Ruolo del MIF in gravidanza*** **Ietta F**, Romagnoli R, Paulesu L -. In: E.Piccione (Editor), *LA*

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*PLACENTA: biologia e clinic. CIC Edizioni Internazionali, Roma, Italia, (2003) pp: 52 – 55.*

**Citoquinas** . Paulesu L, Caten C, **Ietta F**, Romagnoli R - *In: A. Pellicer, C.Simon, F. Petraglia (Editors), Cuadernos de MEDICINA REPRODUCTIVA. EDITORIAL MEDICA PANAMERICANA, MADRID, SPAGNA (2003), Vol. 9 (2) pp:99 – 106.*