



BIOGRAPHICAL SKETCH			
NAME: MARTÍNEZ GARCÍA, MARÍA ÁNGELES		POSITION TITLE: Ph.D., Biomedical research.	
BIRTH DATE & LOCATION: August 2, 1977, Madrid, Spain		HRyC – CIBERDEM – IRYCIS (Madrid, Spain)	
EDUCATION/TRAINING:	DEGREE	YEAR(s)	FIELD OF STUDY
Universidad Autónoma de Madrid (UAM)	Graduate	2000	Biological Sciences
Centro de Biología Molecular “Severo-Ochoa”- UAM	Ph.D.	2006	Biochemistry and Molecular Biology

Positions and Employment

- 2000-2006 PreDoctoral Fellow. Centro de Biología Molecular “Severo-Ochoa”, Universidad Autónoma de Madrid.
- 2006-2008 PostDoctoral Researcher. Department of Endocrinology, Hospital Universitario Ramón y Cajal, Madrid.
- 2008-present PhD Researcher. Diabetes, Obesity and Human Reproduction Research Group, Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas (CIBERDEM); Instituto Ramón y Cajal de Investigación Sanitaria (IRYCIS), Madrid.

Since 2006, my work has been centered on understanding the etiopathogenesis of polycystic ovary syndrome (PCOS) as a chronic metabolic disorder of complex multifactorial etiology. I have mainly focused on studying the influence of sex and sex hormones, and their interaction with obesity, on the development of abdominal adiposity and visceral adipose tissue dysfunction as pathogenetic factors of metabolic dysfunction and inflammation, postprandial dysmetabolism, and related comorbidities. This investigation involves both human and animal models, and its approach from different perspectives including targeted and free (non-targeted) strategies, diverse -omics technologies and gut microbiota studies.

Participation in Research Projects

- 01/07/2002-30/06/2005 Fundación Ramón Areces. Identificación y funcionalidad de genes humanos implicados en el metabolismo celular de cobalaminas.
- G03/054 01/01/2003-31/12/2005 Instituto de Salud Carlos III. Red de Enfermedades Metabólicas Hereditarias (REDEMETH).
- C03/07 01/01/2003-31/12/2005 Instituto de Salud Carlos III. Red de Centros de Genética Clínica y Molecular.
- RD06/0015/0007 1/1/2007-31/12/2010 Spanish Ministry of Science and Innovation. Red de diabetes y enfermedades metabólicas asociadas. (REDIMET).
- FIS PI080944 01/01/2009-31/12/2011 Spanish Ministry of Science and Innovation. Influence of androgens on the development of abdominal adiposity and on the dysfunction of visceral fat in humans, as pathogenetic factors for insulin resistance and diabetes.
- FIS PI1100357 01/01/2012-31/12/2015 Spanish Ministry of Economy and Competitiveness. Hormonal, metabolic, inflammatory and oxidative responses to the intake of individual dietary macronutrients: influence of sex steroids.
- FIS PI1501686 01/01/2016-31/12/2018 Spanish Ministry of Economy and Competitiveness. Influence of sex and sex hormones on adipose tissue dysfunction and chronic metabolic disorders of complex multifactorial etiology (SEXMETAB).
- FIS PIE1600050 01/01/2017-31/12/2019 Spanish Ministry of Economy and Competitiveness. Influence of sex and sex hormones on human chronic disorders of complex etiology (SEXCOMPLEX).

9. FIS PI1801122 01/01/2019-31/12/2021 Spanish Ministry of Economy and Competitiveness. Amount, distribution and dysfunction of body fat as determinants of female gonadal dysfunction: from functional hypothalamic amenorrhea to the polycystic ovary syndrome.

10. FIS PI2100116 01/01/2022-31/12/2024 Spanish Ministry of Science, Innovation and Universities. Carlos III Health Institute. Validation of biomarkers for the diagnosis, prognosis and prediction of therapeutic outcomes in women with polycystic ovary syndrome (PCOS).

Publication record

WOS metrics: H-index (16); sum of times cited (830); cumulative IF (166.46); mean IF (4.62)

1: Nattero-Chávez L, Martínez-García MÁ, Redondo López S, Fernández-Durán E, Dorado Avendaño B, Escobar-Morreale HF, Luque-Ramírez M. High serum copeptin may be a marker of an increased carotid intima-media thickness in asymptomatic patients with type 1 diabetes. *J Diabetes Complications*. 2022; 36(1):108085. PMID: 34823978.

2: Luque-Ramírez M, Ortiz-Flores AE, Nattero-Chávez L, Martínez-García MÁ, Insenser M, Álvarez-Blasco F, Fernández-Durán E, Quintero-Tobar A, de Lope Quiñones S, Escobar-Morreale HF. Bloodletting has no effect on the blood pressure abnormalities of hyperandrogenic women taking oral contraceptives in a randomized clinical trial. *Sci Rep*. 2021; 11(1):22097. PMID: 34764381

3: Ortiz-Flores AE, Martínez-García MÁ, Nattero-Chávez L, Álvarez-Blasco F, Fernández-Durán E, Quintero-Tobar A, Escobar-Morreale HF, Luque-Ramírez M. Iron Overload in Functional Hyperandrogenism: In a Randomized Trial, Bloodletting Does Not Improve Metabolic Outcomes. *J Clin Endocrinol Metab*. 2021; 106(4):e1559-e1573. PMID: 33462622.

4: Martínez-García MÁ, Moncayo S, Insenser M, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. Postprandial responses of circulating energy homeostasis mediators to single macronutrient challenges: influence of obesity and sex hormones. *Food Funct*. 2021;12(3):1051-1062. PMID: 33443255.

5: Nattero-Chávez L, Martínez-García MÁ, Fernández-Durán E, Redondo López S, Dorado Avendaño B, Escobar-Morreale HF, Luque-Ramírez M. Fasting serum copeptin and asymptomatic peripheral artery disease: No association in patients with type 1 diabetes mellitus. *Diabetes Metab*. 2021; 47(3):101207. PMID: 33160031.

6: Moncayo S, Insenser M, Martínez-García MÁ, Fuertes-Martín R, Amigó-Grau N, Álvarez-Blasco F, Luque-Ramírez M, Correig-Blanchar X, Escobar-Morreale HF. Acute-phase glycoprotein profile responses to different oral macronutrient challenges: Influence of sex, functional hyperandrogenism and obesity. *Clin Nutr*. 2021; 40(3):1241-1246. PMID: 32847693.

7: Insenser M, Moncayo S, Martínez-García MÁ, Fernández-Durán E, Samino S, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. 2D Diffusion-Ordered 1H-NMR Spectroscopy Lipidomic Profiling after Oral Single Macronutrient Loads: Influence of Obesity, Sex, and Female Androgen Excess. *Mol Nutr Food Res*. 2020; 64(9):e1900928. PMID: 32187436.

8: Martínez-García MÁ, Ojeda-Ojeda M, Rodríguez-Martín E, Insenser M, Moncayo S, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. TLR2 and TLR4 Surface and Gene Expression in White Blood Cells after Fasting and Oral Glucose, Lipid and Protein Challenges: Influence of Obesity and Sex Hormones. *Biomolecules*. 2020; 10(1):111. PMID: 31936430.

9: Martínez-García MÁ, Moncayo S, Insenser M, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. Metabolic Cytokines at Fasting and During Macronutrient Challenges: Influence of Obesity, Female Androgen Excess and Sex. *Nutrients*. 2019; 11(11):2566. PMID: 31652917.

10: Fuertes-Martín R, Moncayo S, Insenser M, Martínez-García MÁ, Luque-Ramírez M, Grau NA, Blanchar XC, Escobar-Morreale HF. Glycoprotein A and B Height-to-Width Ratios as Obesity-Independent Novel Biomarkers of Low-Grade Chronic Inflammation in Women with Polycystic Ovary Syndrome (PCOS). *J Proteome Res*. 2019;18(11):4038-4045. PMID: 31503497.

11: Martínez-García MÁ, Moncayo S, Insenser M, Montes-Nieto R, Fernández-Durán E, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. Postprandial inflammatory responses after oral glucose, lipid and protein challenges: Influence of obesity, sex and polycystic ovary syndrome. *Clin Nutr*. 2020; 39(3):876-885. PMID: 30975555.

12: Insenser M, Murri M, Del Campo R, Martínez-García MÁ, Fernández-Durán E, Escobar-Morreale HF. Gut Microbiota and the Polycystic Ovary Syndrome: Influence of Sex, Sex Hormones, and Obesity. *J Clin Endocrinol Metab*. 2018; 103(7):2552-2562. PMID: 29897462.

13: Montes-Nieto R, Insenser M, Murri M, Fernández-Durán E, Ojeda-Ojeda M, Martínez-García MÁ, Luque-Ramírez M, Escobar-Morreale HF. Plasma thiobarbituric acid reactive substances (TBARS) in young adults: Obesity increases fasting levels only in men whereas glucose ingestion, and not protein or lipid intake, increases postprandial concentrations regardless of sex and obesity. *Mol Nutr Food Res*. 2017; 61(11). PMID: 28722287.

- 14: Escobar-Morreale HF, Martínez-García MÁ, Montes-Nieto R, Fernández-Durán E, Temprano-Carazo S, Luque-Ramírez M. Effects of glucose ingestion on circulating inflammatory mediators: Influence of sex and weight excess. *Clin Nutr*. 2017; 36(2):522-529. PMID:26874912.
- 15: Montes-Nieto R, Martínez-García MÁ, Luque-Ramírez M, Escobar-Morreale HF. Differences in analytical and biological results between older and newer lots of a widely used irisin immunoassay question the validity of previous studies. *Clin Chem Lab Med*. 2016; 54(7):e199-201. PMID:26677893.
- 16: Insenser M, Montes-Nieto R, Martínez-García MÁ, Escobar-Morreale HF. A nontargeted study of muscle proteome in severely obese women with androgen excess compared with severely obese men and nonhyperandrogenic women. *Eur J Endocrinol*. 2016; 174(3):389-98. PMID: 26671973.
- 17: Ojeda-Ojeda M, Martínez-García MÁ, Alpañés M, Luque-Ramírez M, Escobar-Morreale HF. Association of TLR2 S450S and ICAM1 K469E polymorphisms with polycystic ovary syndrome (PCOS) and obesity. *J Reprod Immunol*. 2016; 113:9-15. PMID: 26498675.
- 18: Alpañés M, Luque-Ramírez M, Martínez-García MÁ, Fernández-Durán E, Álvarez-Blasco F, Escobar-Morreale HF. Influence of adrenal hyperandrogenism on the clinical and metabolic phenotype of women with polycystic ovary syndrome. *Fertil Steril*. 2015; 103(3):795-801.e2. PMID: 25585504.
- 19: Insenser M, Montes-Nieto R, Martínez-García MÁ, Durán EF, Santiuste C, Gómez V, Kline JA, Escobar-Morreale HF, Jiménez D. Identification of reduced circulating haptoglobin concentration as a biomarker of the severity of pulmonary embolism: a nontargeted proteomic study. *PLoS One*. 2014; 9(6):e100902. PMID: 24979072.
- 20: Luque-Ramírez M, Martínez-García MÁ, Montes-Nieto R, Fernández-Durán E, Insenser M, Alpañés M, Escobar-Morreale HF. Sexual dimorphism in adipose tissue function as evidenced by circulating adipokine concentrations in the fasting state and after an oral glucose challenge. *Hum Reprod*. 2013; 28(7):1908-18. PMID: 23559188.
- 21: Alpañés M, Sanchón R, Martínez-García MÁ, Martínez-Bermejo E, Escobar-Morreale HF. Prevalence of hyperprolactinaemia in female premenopausal blood donors. *Clin Endocrinol (Oxf)*. 2013; 79(4):545-9. PMID: 23445257.
- 22: Montes-Nieto R, Insenser M, Martínez-García MÁ, Escobar-Morreale HF. A nontargeted proteomic study of the influence of androgen excess on human visceral and subcutaneous adipose tissue proteomes. *J Clin Endocrinol Metab*. 2013; 98(3):E576-85. PMID:23348399.
- 23: Martínez-García MÁ, Montes-Nieto R, Fernández-Durán E, Insenser M, Luque-Ramírez M, Escobar-Morreale HF. Evidence for masculinization of adipokine gene expression in visceral and subcutaneous adipose tissue of obese women with polycystic ovary syndrome (PCOS). *J Clin Endocrinol Metab*. 2013; 98(2):E388-96. PMID: 23337724.
- 24: Martínez-García MÁ, Gambineri A, Alpañés M, Sanchón R, Pasquali R, Escobar-Morreale HF. Common variants in the sex hormone-binding globulin gene (SHBG) and polycystic ovary syndrome (PCOS) in Mediterranean women. *Hum Reprod*. 2012; 27(12):3569-76. PMID: 23001781.
- 25: Sanchón R, Gambineri A, Alpañés M, Martínez-García MÁ, Pasquali R, Escobar-Morreale HF. Prevalence of functional disorders of androgen excess in unselected premenopausal women: a study in blood donors. *Hum Reprod*. 2012; 27(4):1209-16. PMID: 22343706.
- 26: Martínez-García MA, San-Millán JL, Escobar-Morreale HF. The R453Q and D151A polymorphisms of hexose-6-phosphate dehydrogenase gene (H6PD) influence the polycystic ovary syndrome (PCOS) and obesity. *Gene*. 2012; 497(1):38-44. PMID: 22306327.
- 27: Insenser M, Martínez-García M, Nieto RM, San-Millán JL, Escobar-Morreale HF. Impact of the storage temperature on human plasma proteomic analysis: implications for the use of human plasma collections in research. *Proteomics Clin Appl*. 2010; 4(8-9):739-44. PMID: 21174910.
- 28: Insenser M, Martínez-García MA, Montes R, San-Millán JL, Escobar-Morreale HF. Proteomic analysis of plasma in the polycystic ovary syndrome identifies novel markers involved in iron metabolism, acute-phase response, and inflammation. *J Clin Endocrinol Metab*. 2010; 95(8):3863-70. PMID: 20484478.
- 29: Alvarez-Blasco F, Martínez-García MA, Luque-Ramírez M, Parraza N, San Millán JL, Escobar-Morreale HF. Role of haptoglobin in polycystic ovary syndrome (PCOS), obesity and disorders of glucose tolerance in premenopausal women. *PLoS One*. 2009; 4(5):e5606. PMID: 19440331.
- 30: Martínez-García MA, Luque-Ramírez M, San-Millán JL, Escobar-Morreale HF. Body iron stores and glucose intolerance in premenopausal women: role of hyperandrogenism, insulin resistance, and genomic variants related to inflammation, oxidative stress, and iron metabolism. *Diabetes Care*. 2009; 32(8):1525-30. PMID: 19401444.
- 31: Escobar-Morreale HF, Botella-Carretero JI, Martínez-García MA, Luque-Ramírez M, Alvarez-Blasco F, San Millán JL. Serum osteoprotegerin concentrations are decreased in women with the polycystic ovary syndrome. *Eur J Endocrinol*. 2008; 159(3):225-32. PMID: 18579554.

- 32: Botella-Carretero JI, Alvarez-Blasco F, Martinez-García MA, Luque-Ramírez M, San Millán JL, Escobar-Morreale HF. The decrease in serum IL-18 levels after bariatric surgery in morbidly obese women is a time-dependent event. *Obes Surg*. 2007; 17(9):1199-208. PMID: 18074495.
- 33: Merinero B, Pérez B, Pérez-Cerdá C, Rincón A, Desviat LR, Martínez MA, Ruiz Sala P, García MJ, Aldamiz-Echevarría L, Campos J, Cornejo V, Del Toro M, Mahfoud A, Martínez-Pardo M, Parini R, Pedrón C, Peña-Quintana L, Pérez M, Pourfarzam M, Ugarte M. Methylmalonic acidemia: Examination of genotype and biochemical data in 32 patients belonging to mut, cblA or cblB complementation group. *Journal of Inherited Metabolic Disease*. 2008; 31(1): 55-66. PMID: 17957493.
- 34: Martínez, M.A., Rincón, A., Desviat, L.R., Merinero, B., Ugarte, M. Y Pérez, B. Genetic Analysis of Three Genes Causing Isolated Methylmalonic Acidemia. Identification of Twenty One Novel Allelic Variants. *Molecular Genetics and Metabolism*. 2005; 84(4):317-325. PMID: 15781192.
- 35: Pey, A.L., Pérez, B., Desviat, L.R., Martínez, M.A., Aguado, C., Erlandsen, H., Gámez, A., Stevens, R.C., Thóroólfsson, M., Ugarte, M. y Martínez, A. Mechanism Underlying Responsiveness to Tetrahydrobiopterin in Mild Phenylketonuria Mutations. *Human Mutation*. 2004; 24:388-399. PMID: 15459954.
- 36: Clavero, S., Martínez, M.A., Pérez, B., Pérez-Cerdá, C., Ugarte, M. y Desviat, L.R. Functional characterization of PCCA mutations causing propionic academia. *Biochimica et Biophysica Acta*. 2002; 1588:119-125. PMID: 12385775.