


BIOGRAPHICAL SKETCH				
	NAME: Maria Insenser Nieto		POSITION TITLE: Postdoctoral Researcher of Centro de Investigación Biomédica en Red Diabetes y Enfermedades Metabólicas Asociadas, CIBERDEM	
	BIRTH DATE & LOCATION: July 13, 1976, Madrid, Spain			
	EDUCATION/TRAINING:			
	INSTITUTION AND LOCATION	DEGREE	YEAR(s)	FIELD OF STUDY
	Universidad Complutense de Madrid	B.S.	2000	Pharmacy
Universidad Complutense de Madrid	M.S.	2001	Microbiology	
Universidad Complutense de Madrid	Ph.D.	2008	Microbiology	

## POSITIONS AND HONORS

I have been working for 7 years in basic research at the Faculty of Pharmacy and since 2007 I develop my research activity at "Diabetes, Obesity and Human Reproduction" group (DORH) of the Endocrinology and Nutrition Service of the Ramón y Cajal Hospital Madrid, Spain. DORH group is a member of the Spanish Biomedical Research Centre in Diabetes and Associated Metabolic Disorders (CIBERDEM). My research areas of interest include the application of "omics" techniques to the study of sex steroids and gonadal dysfunction (polycystic ovary syndrome or functional hypogonadotropic hypogonadism). My work include proteomics, miRNAs, metabolomics and microbiota to understand the development of abdominal adiposity and metabolic dysfunction of visceral adipose tissue.

## Positions and Employment

2000	Student Fellow at the Microbiology Department of Complutense University of Madrid.
2001-2006	PreDoctoral Fellow at Microbiology Department of Complutense University of Madrid.
2004	Research Fellow at Biochemistry and Molecular Biology Department of University of Southern Denmark Odense.
2007-present	Postdoctoral Researcher of Diabetes, Obesity and Human Reproduction Research Group, Centro de Investigación Biomédica en Red Diabetes y Enfermedades Metabólicas Asociadas CIBERDEM.

## PUBLICATION RECORD

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***h index:18; / 20 (Scholar); i10 index: 30 (Scholar) sum of times cited without self-citations according to ISI WoK: 1209; average citations per article: 32. cumulative IF (180.99); mean IF (5.02)***

- Bloodletting has no effect on the blood pressure abnormalities of hyperandrogenic women taking oral contraceptives in a randomized clinical trial. 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. *Sci Rep.* 2021; 11(1):22097. PMID: 34764381.
- Remission of Diabetes Following Bariatric Surgery: Plasma Proteomic Profiles. Insenser M, Vilarrasa N, Vendrell J, Escobar-Morreale HF. *J Clin Med.* 2021 Aug 28;10(17):3879. PMID: 34501327
- Postprandial responses of circulating energy homeostasis mediators to single macronutrient challenges: influence of obesity and sex hormones. Martínez-García MÁ, Moncayo S, Insenser M, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. *Food Funct.* 2021;12(3):1051-1062. PMID: 33443255.
- Acute-phase glycoprotein profile responses to different oral macronutrient challenges: Influence of sex, functional hyperandrogenism and obesity. 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. *Clin Nutr.* 2021; 40(3):1241-1246. PMID: 32847693.
- 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. Martínez-García MÁ, Ojeda-Ojeda M, Rodríguez-Martín E, Insenser M, Moncayo S, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. *Biomolecules.* 2020 Jan 9;10(1). pii: E111. PMID: 31936430
- 2D Diffusion-Ordered 1H-NMR Spectroscopy Lipidomic profiling after oral single macronutrient loads: influence of obesity, sex, and female androgen excess. Insenser M, Moncayo S, Martínez-García MÁ, Fernández-Durán E, Samino S, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. *Mol Nutr Food Res.* 2020; 64(9):e1900928. PMID: 32187436.

7. Changes in soluble TWEAK concentrations, but not those in amyloid- $\beta$ (1-40), are associated with a decrease in carotid intima-media thickness after bariatric surgery in obese women. Gómez-Martin JM, Aracil E, Insenser M, de la Peña G, Lasunción MA, Galindo J, Escobar-Morreale HF, Balsa JA, Botella-Carretero JI. *Obes Facts*. 2020;13(3):321-330. PMID: 32388504
8. 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). Fuertes-Martín R, Moncayo S, Insenser M, Martínez-García MÁ, Luque-Ramírez M, Grau NA, Blanchar XC, Escobar-Morreale HF. *J Proteome Res*. 2019;18(11):4038-4045. PMID: 31503497.
9. Metabolic Cytokines at Fasting and During Macronutrient Challenges: Influence of Obesity, Female Androgen Excess and Sex. Martínez-García MÁ, Moncayo S, Insenser M, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. *Nutrients*. 2019; 11(11):2566. PMID: 31652917.
10. Postprandial inflammatory responses after oral glucose, lipid and protein challenges: Influence of obesity, sex and polycystic ovary syndrome. Martínez-García MÁ, Moncayo S, Insenser M, Montes-Nieto R, Fernández-Durán E, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. *Clin Nutr*. 2019 Apr 1. pii: S0261-5614(19)30141-4. PMID: 30975555
11. Androgen Excess in Women: Proteomic and Metabolomic Approaches. Insenser M, Escobar-Morreale HF. *Front Horm Res*. 2019;53:162-176. PMID: 31499504
12. 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). Fuertes-Martín R, Moncayo S, Insenser M, Martínez-García MÁ, Luque-Ramírez M, Grau NA, Blanchar XC, Escobar-Morreale HF. *J Proteome Res*. 2019 Nov 1;18(11):4038-4045. PMID: 31503497
13. Metabolic Cytokines at Fasting and During Macronutrient Challenges: Influence of Obesity, Female Androgen Excess and Sex. Martínez-García MÁ, Moncayo S, Insenser M, Álvarez-Blasco F, Luque-Ramírez M, Escobar-Morreale HF. *Nutrients*. 2019 Oct 24;11(11). pii: E2566. PMID: 31652917
14. Circulating adiponectin increases in obese women after sleeve gastrectomy or gastric bypass driving beneficial metabolic changes but with no relationship with carotid intima-media thickness. Gómez-Martin JM, Balsa JA, Aracil E, Insenser M, Priego P, Escobar-Morreale HF, Botella-Carretero JI. *Clin Nutr*. 2018 Dec;37(6 Pt A):2102-2106. PMID: 29054470
15. Non-targeted profiling of circulating microRNAs in women with polycystic ovary syndrome (PCOS): effects of obesity and sex hormones. Murri M, Insenser M, Fernández-Durán E, San-Millán JL, Luque-Ramírez M, Escobar-Morreale HF. *Metabolism*. 2018 Sep;86:49-60. PMID: 29410349
16. Gut Microbiota and the Polycystic Ovary Syndrome: Influence of Sex, Sex Hormones, and Obesity. Insenser M, Murri M, Del Campo R, Martínez-García MÁ, Fernández-Durán E, Escobar-Morreale HF. *J Clin Endocrinol Metab*. 2018 Jul 1;103(7):2552-2562. PMID: 29897462
17. A nontargeted study of muscle proteome in severely obese women with androgen excess compared with severely obese men and nonhyperandrogenic women. M. Insenser, R. Montes-Nieto, M. A. Martínez-García, H. F. Escobar-Morreale. *Eur J Endocrinol*. 2016 Mar;174(3):389-98. PMID: 26671973.
18. Allelic Mutations of KITLG, Encoding KIT Ligand, Cause Asymmetric and Unilateral Hearing Loss and Waardenburg Syndrome Type 2. C. Zazo Seco, L. Serrão de Castro, J. W. van Nierop, M. Morín, S. Jhangiani, E. J. Verver, M. Schraders, N. Maiwald, M. Wesdorp, H. Venselaar, L. Spruijt, J. Oostrik, J. Schoots; Baylor-Hopkins Center for Mendelian Genomics, J. van Reeuwijk, S. H. Lelieveld, P. L. Huygen, M. Insenser, R. J. Admiraal, R. J. Pennings, L. H. Hoefsloot, A. Arias-Vásquez, J. de Ligt, H. G. Yntema, J. H. Jansen, D. M. Muzny, G. Huls, M. M. van Rossum, J. R. Lupski, M. A. Moreno-Pelayo, H. P. Kunst, H Kremer. *Am J Hum Genet*. 2015 Nov 5;97(5):647-60. PMID: 26522471.
19. Identification of reduced circulating haptoglobin concentration as a biomarker of the severity of pulmonary embolism: a nontargeted proteomic study. M Insenser, R Montes-Nieto, MÁ Martínez-García, E Fernández-Durán, Santiuste C, V Gómez, JA Kline, HF Escobar-Morreale, D Jiménez. *PLoS One*. 2014 Jun 30;9(6):e100902. PMID: 24979072.
20. Metabolomics in polycystic ovary syndrome. M. Murri, M. Insenser, H. F. Escobar-Morreale. *Clin Chim Acta*. 2014; 429:181-188. PMID: 24368231.
21. Proteomic analysis of adipose tissue: informing diabetes research. M Murri, M Insenser, M Luque-Ramirez, FJ Tinahones, HF Escobar-Morreale. *Expert Rev Proteomics*. 2014 Aug;11(4):491-502. PMID: 24684164.

22. A nontargeted proteomic study of the influence of androgen excess on human visceral and subcutaneous adipose tissue proteomes. R. Montes-Nieto, M. Insenser, M. A. Martínez-García, H. F. Escobar-Morreale. *J Clin Endocrinol Metab.* 2013;98(3):E576-85. PMID: 23348399.
23. Proteomic and metabolomic approaches to the study of polycystic ovary syndrome. M. Insenser, R. Montes-Nieto M. Murri, H. F. Escobar-Morreale. *Mol Cell Endocrinol.* 2013;370(1-2):65-77. PMID: 23422073.
24. Sexual dimorphism in adipose tissue function as evidenced by circulating adipokine concentrations in the fasting state and after an oral glucose challenge. M. Luque-Ramírez, M. A. Martínez-García, R. Montes-Nieto, E. Fernández-Durán, M. Insenser, M. Alpañés, H. F. Escobar-Morreale. *Hum Reprod.* 2013;28(7):1908-1. PMID: 23559188.
25. Circulating markers of oxidative stress and polycystic ovary syndrome (PCOS): a systematic review and meta-analysis. M. Murri, M. Luque-Ramírez, M. Insenser, M. Ojeda-Ojeda, H. F. Escobar-Morreale. *Hum Reprod Update* 2013;19:268-88. PMID: 23303572.
26. Evidence for masculinization of adipokine gene expression in visceral and subcutaneous adipose tissue of obese women with polycystic ovary syndrome (PCOS). M. A. Martínez-García, R. Montes-Nieto, E. Fernández-Durán, M. Insenser, M. Luque-Ramírez, H. F. Escobar-Morreale. *J Clin Endocrinol Metab.* 2013;98(2):E388-96. PMID: 23337724
27. Effects of polycystic ovary syndrome (PCOS), sex hormones, and obesity on circulating miRNA-21, miRNA-27b, miRNA-103 and miRNA-155 expression. M. Murri, M. Insenser, E. Fernández-Durán, J. L. San-Millán, H. F. Escobar-Morreale. *The Journal of Clinical Endocrinology & Metabolism* 2013;98(11):E1835-44. PMID: 24037889.
28. Mediators of low-grade chronic inflammation in polycystic ovary syndrome (PCOS). M. Ojeda-Ojeda, M. Murri, M. Insenser, H. F. Escobar-Morreale. *Curr Pharm Des.* 2013;19(32):5775-91. PMID: 23448487.
29. Proteomics and polycystic ovary syndrome. M. Insenser, H. F. Escobar-Morreale. *Expert review of proteomics* 2013;10(5):435-47. PMID: 24087928.
30. Proteomic analysis of visceral adipose tissue in pre-obese patients with type 2 diabetes. M. Murri, M. Insenser, M. R. Bernal-Lopez, P. Perez-Martinez, H. F. Escobar-Morreale, F. J. Tinahones. *Molecular and Cellular Endocrinology* 2013;376(1-2):99-106. PMID: 23791845.
31. Metabolic heterogeneity in polycystic ovary syndrome is determined by obesity: plasma metabolomic approach using GC MS. H.F. Escobar-Morreale, S. Samino, M. Insenser, M. Vinaixa, M. Luque-Ramírez, M.A. Lasunción, X. Correig. *Clinical Chemistry.* 2012; 58(6):999-1009. PMID: 22427353.
32. A nontargeted proteomic approach to the study of visceral and subcutaneous adipose tissue in human obesity. M. Insenser, R. Montes-Nieto, N. Vilarrasa, A. Lecube, R. Simó, J. Vendrell, H.F. Escobar-Morreale. *Mol Cell Endocrinol.* 2012;363(1-2):10-9. PMID: 22796336
33. Application of proteomics to the study of polycystic ovary syndrome. M. Insenser, H. F. Escobar-Morreale. *Journal of Endocrinological Investigation.* 2011;34(11): 869-875. PMID: 22104628.
34. Gel and gel-free proteomics to identify *Saccharomyces cerevisiae* cell surface proteins. M. Insenser, M. L. Hernaez, C. Nombela, M. Molina, G. Molero, C. Gil. *Journal of Proteomics.* 2010; 73 (6):1183-1195. PMID: 20176154
35. Proteomic analysis of plasma in the polycystic ovary syndrome identifies novel markers involved in iron metabolism, acute-phase response, and inflammation. Insenser M, Martínez-García MA, Montes R, San-Millán JL, Escobar-Morreale HF. *J Clin Endocrinol Metab.* 2010 Aug;95(8):3863-70. PMID: 20484478.
36. Impact of the storage temperature on human plasma proteomic analysis: implications for the use of human plasma collections in research. M. Insenser, M. A. Martínez-García, R. Montes Nieto, J. L. San-Millán and H. F. Escobar-Morreale. *Proteomics - Clinical Applications.* 2010;4,739-744. PMID: 21174910.
37. Proteomics and genomics: A hypothesis-free approach to the study of the role of visceral adiposity in the pathogenesis of the polycystic ovary syndrome. H. F. Escobar-Morreale, M. Insenser, M. Corton, J.L. San Millán, B. Peral. *Proteomics Clinical Applications.* 2008;2(3): 444-455. PMID 21136846
38. Proteomic analysis reveals metabolic changes during yeast to hypha transition in *Yarrowia lipolytica*. M. Morin, L. Monteoliva, M. Insenser, C. Gil, A. Domínguez. *Journal of Mass Spectrometry.* 2007;42(11):1453-1462. PMID: 17960580
39. Proteomic analysis of detergent-resistant membranes from *Candida albicans*. M. Insenser, C. Nombela, G. Molero, C. Gil. *Proteomics* 2006;6:S74-S81. PMID: 16534748

## **PARTICIPATION IN RESEARCH PROJECTS**

1. 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).
2. DEM21\_PIM02. CIBERDEM 01/07/2021-31/12/2022 Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas. Sexual dimorphism and inflammatory biomarkers in patients with type 1 diabetes and cardiac autonomic neuropathy.
3. FIS PIE16005 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 (acronym: SEXCOMPLEX)
4. 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 (acronym: SEXMETAB)
5. FIS PI1100357 01/01/2012-31/12/2015 Spanish Ministry of Economy and Competitiveness. Hormonal, metabolic, inflammatory and oxidant responses to the different macronutrients of diet: influence of sex steroids.
6. 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.
7. DIASOBS 1/1/2009-31/12/2011 CIBERDEM Centro de Investigación Biomédica en Red de Diabetes y Enfermedades Metabólicas Asociadas. Determinants of insulin resistance and of disorders of glucose tolerance, including diabetes, in severe obesity, and their changes after bariatric surgery-induced weight loss.
8. RD06/0015/0007 1/1/2007-31/12/2010 Spanish Ministry of Science and Innovation. Red de diabetes y enfermedades metabólicas asociadas. (REDIMET)
9. BIO2003-00030 1/12/2003-30/11/2006 Spanish Ministry of Science and Innovation. Estudio del proteoma de la pared celular de *Candida albicans*. Aplicaciones al estudio de dianas de antifúngicos y al desarrollo de estrategias de diagnóstico e inmunoprotección.
10. QLK3-CT-2000-01537 1/1/2001-31/12/2001 European Union. Exploiting Yeast Cell wall for highthroughput screening of antimicrobial agents.