CURRICULUM VITAE

DATE OF REVISION: 01/10/2016

NAME: Carlos Fernández Hernando Ph.D.

POSITION: Associate Professor of Medicine in the Departments of Comparative Medicine and Pathology. Vascular Biology and Therapeutics Program (VBT). **Traditional Track**

TERM: September 1, 2013 to August 30, 2018.

SCHOOL: Yale University School of Medicine.

EDUCATION:
1993-98: Universidad Autónoma de Madrid, Spain, Graduate Degree: B.S (Chemistry)
1998-03: Universidad Autónoma de Madrid, Spain, Graduate Degree: Ph.D (Biochemistry/Molecular Biology)
2003-04: Postdoctoral Fellow (Biochemistry), Hospital Ramón y Cajal, Spain.
2005-07: Postdoctoral Fellow (Pharmacology), Yale University School of Medicine, USA.

CAREER/ACADEMIC APPOINTMENTS:
2008-2009: Associate Research Scientist. Department of Pharmacology. Yale University School of Medicine, USA.
2009-2013. Assistant Professor. Department of Medicine and Cell Biology (Tenure Track). New York University School of Medicine. New York, USA.
2013-Present. Associate Professor, Section Comparative Medicine. Interdepartmental Program in Vascular Biology and Therapeutics (VBT). Yale University School of Medicine, New Haven, Connecticut, US.
2014-Present. Associate Professor, Department of Pathology (secondary appointment). Interdepartmental Program in Integrative Cell Signaling & Neurobiology Metabolism (ICSNM). Yale University School of Medicine, New Haven, Connecticut, US.

ADMINISTRATIVE POSITIONS:
2012. President New York Lipid and Vascular Biology Club. Rockefeller University.

BOARD OF CERTIFICATION:
N/A

PROFESSIONAL HONORS & RECOGNITION:
2015. **Established Investigator Award**. American Heart Association. USA
2013. **Kingsley Award in Medical Research**. Yale University School of Medicine.
2011. **Springer Junior Faculty Investigator Award**. North American Vascular Biology Organization (NAVBO).
2010. **David L. Williams Memorial Award**. The Kern Aspen Lipid Conference. Colorado. USA.
2010. **Irvine H. Page Young Investigator Award**. American Heart Association. USA
2008. **Ramón y Cajal Award** from Ministerio de Educación y Ciencia. Spain. (*decline*)
2008. **Scientist Development Award** from American Heart Association. USA.
2008. **Keystone Symposia Scholarship.**
2007. **Postdoctoral Fellowship Award** from Philip Morris External Research Program. USA.
2006.**Young Investigator Award**. 4th International Conference on the Biology, Chemistry and Therapeutic Applications of Nitric Oxide, Monterrey, CA.
2005. **Postdoctoral Fellowship Award** from Ministerio de Educación y Ciencia. Spain.
2004. **Postdoctoral Fellowship Award** from Comunidad de Madrid, Spain.

2004. **Esteve Laboratories Award**, to the best original research contribution published in Clínica e Investigación en Arteriosclerosis. Spanish Atherosclerosis Society

GRANT/CLINICAL TRIALS HISTORY:

Active

1. Agency: National Institutes of Health (NIH).
I.D.# P30 DK045735
Title of project: Role of Hypothalamic LIN28/Let-7 Axis in Regulating Insulin Signaling and Glucose Metabolism.
P.I.: Sabrina Diano/Carlos Fernández-Hernando (Co-I)
Date of Award: Feb 1, 2014-Jan 31, 2016.

2. Agency: Foundation Leducq (Transatlantic Netwoks of Excellence). MIRVAD
I.D.# MIRVAD
Title of project: MIRVAD (Role of secreted microRNAs in cardiovascular disease)
P.I.: Carlos Fernández-Hernando
Percent of effort: 10%
Date of Award: Jan 1, 2014-Dec 31, 2018.

3. Agency: National Institutes of Health (NIH/NHLBI).
I.D.# R01HL106063
Title of project: Caveolin-1 in lipoprotein metabolism and atherosclerosis.
P.I.: Carlos Fernández-Hernando
Percent of effort: 42.5%
Date of Award: Feb 1, 2011-Nov 30, 2016

4. Agency: National Institutes of Health (NIH/NHLBI).
I.D.# R01HL107953
Title of project: Role of microRNAs in lipid metabolism and cardiovascular disease.
P.I.: Carlos Fernández-Hernando
Percent of effort: 35%
Date of Award: Feb 1, 2011-Nov 30, 2015. **The renewal of this grant (2016-2020) has obtained a score of 21 and 7 percentile**.

5. Agency: American Heart Association (AHA). Established Investigator Award.
I.D.# 16EIA27550004
Title of project: Molecular Regulation of Cholesterol Metabolism.
P.I.: Carlos Fernández-Hernando
Percent of effort: 10%
Date of Award: Jan 1, 2016-Dec 31, 2020.

Past Grants

1. Agency: American Heart Association (AHA). Scientist Developmental Grant
I.D.# 0835585D
Title of project: Role of protein kinase Akt1 in atherogenesis.
P.I.: Carlos Fernández-Hernando
Percent of effort: 52%
Date of Award: July 1, 2008-Jun 30, 2011.

2. Agency: Philip Morris External Research Program
I.D.# Postdoctoral Fellowship
Title of project: Role of protein kinase Akt1 in atherogenesis.
P.I.: Carlos Fernández-Hernando
Percent of effort: 100%

Date of Award: March 1, 2007-Jun 30, 2008 (*Declined after this date*).

3. Agency: Ministerio de Ciencía y Tecnología (Spain)
I.D.# Postdoctoral Fellowship
Title of project: Role of Nogo-B in Vascular Remodelling.
P.I.: Carlos Fernández-Hernando
Percent of effort: 100%
Date of Award: February 1, 2005-Jan 31, 2007.

INVITED SPEAKING ENGAGEMENTS, PRESENTATIONS, SYMPOSIA & WORKSHOPS NOT AFFILIATED WITH YALE:

2017

- **Gordon Research Conference: Atherosclerosis (June 2015)**, Newry, ME (USA): "Regulation of lipoprotein metabolism by non-coding RNAs".
- **Keystone Symposium: Molecular Mechanisms of Heart Development/RNA-Based Approaches in Cardiovascular Disease (March 2017),** Keystone, Colorado, USA: "miRNAs in lipoprotein metabolism and atherosclerosis".

2016

- **Diabetic Cardiovascular Disease Center. Washinton University School of Medicine in St. Louis (March 2016), St. Louis** (USA): "Regulation of cholesterol metabolsim by microRNAs".
- **Tufts University, HNRCA Seminar Series (March, 2016)**, Boston (USA): "microRNAs and Cardiovascular Disease".
- **Frontiers in Science Seminar at the Samuel and Jean Frankel Cardiovascular Center, University of Michigan (May, 2016)**, Boston (USA): "non-coding RNAs in Cardiometabolic Disease".
- **Spanish Society of Clinical Laboratory Medicine Meeting (October 2016)**, Zaragoza (Spain): "non-coding RNAs in metabolic diseases". (**Plenary Lecture Speaker**).

2015

- **Spanish Society of Hepatology Meeting (February 2015)**, Madrid (Spain): "Role of non-coding RNAs in hepatic lipid metabolism".
- **CBMSO Seminar. Madrid University (February 2015),** Madrid (Spain). "microRNA regulation of cardiometabolic disease".
- **Integrative Medical Sciences, Dr. Hans G. Folkesson Memorial Seminar Series. Northeast Ohio Medical University. (May 2015),** Rootstown (USA). "microRNA regulation of lipid metabolism and cardiometabolic disease".
- **Gordon Research Conference: Atherosclerosis (June 2015)**, Newry, ME (USA): "Regulation of HDL metabolism by non-coding RNAs".
- **Department of Pharmaceutical Sciences Seminar Series. Wayne State University (October 2015**), Detroit (USA): "Molecular regulation of cholesterol metabolism".
- **National Defense Medical Center (NDMC) (September 2015).** Taipei (Taiwan): "New Insights into the molecular mechanism of atherosclerosis".
- **National Health Research Institutes (NHRI) (September 2015).** Taipei (Taiwan): "Regulation of lipid metabolism by non-coding RNAs".
- **Danish Diabetes Academy Symposium on microRNAs in Metabolism (November 2015).** Copenhagen (Denmark). "miRNAs in lipoprotein metabolism and atherosclerosis". **Keynote Lecture Speaker**.
- **XIX Lipid Meeting Leipzig (December 2015)**, Leipzig (Germany). "miRNA regulation of lipoprotein metabolism".

2014

- **Northwestern University Pathology Research Conference. (January 2014).** Chicago (USA): "Regulation of cholesterol homeostasis by microRNAs".
- **7th International Atherosclerosis Society Workshop (March 2014)**. Rome (Italy): "Regulation of HDL metabolism by non-coding RNAs".
- **Gordon Research Conference: Lipoprotein Metabolism. (June 2014).** Waterville Valley, NH: "Posttranscriptional control of lipoprotein metabolism".
- **82nd Congress European Atherosclerosis Society (June 2014)**, Madrid (Spain): "Regulation of vascular cells by microRNAs". **Plenary Lecture**.
- **5th Cardiac Regeneration and Vascular Biology Conference (June 2014)**, San Servolo (Italy): miRNAs in cardiometabolic disease.
- **Special seminar, Hospital Ramón y Cajal (June 2014)**, Madrid (Spain): Control of lipid metabolism by non-coding RNAs.
- **Frontiers in Cardiovascular Biology. European Society of Cardiology (July 2014),** Barcelona (Spain): "Regulation of lipoprotein metabolism by microRNA".
- **Biomedicum Helsinki Seminar, Institute of biotechnology (September 2014)**, Helsinki (Finland): "Regulation of cholesterol metabolism by non-coding RNAs".
- **Symposium Gender & Vascular Science of the Collaborative Research Center. Mechanisms and Networks of Novel Therapeutic Targets (December 2014)**, Munich (Germany): "Role of miRNAs during the progression of atherosclerosis"

2013

- **Phenotypic Flexibility International Symposium (February 2013).** El Escorial (Madrid), Spain. "Control of lipid metabolism by miRNAs".
- **Spanish Society of Atherosclerosis Meeting (May 2013)**, Zaragoza (Spain): "Regulation of LDL receptor activity by novel genes and non-coding RNAs". (Plenary Lecture).
- **American Diabetes Association Annual Meeting (June 2013)**, Chicago (USA): "miRNAs and lipid homeostasis".
- **4th Cardiac Regeneration and Vascular Biology Conference (June 2013)**, San Servolo (Italy): "miRNAs and control of cholesterol metabolism".
- **Center for Cardiovascular Research at Saint Louis University. Seminar series. (January 2013)**. Saint Louis (USA): "MicroRNA functions in vascular and metabolic disease".
- **Sanford Burnham Medical Research Institute. Seminar Series. (January 2013),** Orlando (USA)**:** "Control of Lipid Metabolism by microRNA".
- **Smith-Lemli-Opitz Family and Medical Conference. (June 2013),** Pittsburgh (USA): "Regulation of cholesterol homeostasis by microRNAs".
- **Cardiovascular Regulation by miRNAs international symposium. European Society of Microcirculation (EMS) and the European Vascular Biology Organization (EVBO)**. (July 2013). "miRNAs in metabolic diseases".
- **Kern Lipid Conference. (July 2013),** Vail, Colorado (USA): "Regulation of LDLr activity by miRNAs".
- **University of Cincinnati. Pathology and Laboratory Medicine Department. Seminar Series** (**November**), Cincinnati (USA): "Regulation of lipid metabolism by microRNAs".
- **Tufts University, HNRCA Seminar Series (October 2013)**, Boston (USA): "microRNA regulation of lipid metabolism".

2012

- **Keystone Symposium: Molecular Basis of Vascular Inflammation and Atherosclerosis,** Big Sky Resort, Big Sky, Montana, USA: " microRNAs as regulators of lipid metabolism".
- **European Atherosclerosis Society Satellite Meeting: microRNA and Cardiovascular Disease**, Milan, Italy: "microRNAs and lipid metabolism".
- **Spanish Society of Atherosclerosis Meeting**, Reus (Spain): "MicroRNAs and control of lipid metabolism". (**Plenary Lecture Speaker**).
- **Biocenter Oulu Day 2012: non-coding RNA meeting. Plenary speaker. Oulu, Finland.** "microRNA regulation of cholesterol metabolism".

- **AAB Cardiovascular Research Institute. University of Rochester. Rochester. New York**. "Control of Lipid Metabolism by miRNA-33".
- **Department of Cardiology. University of Massachussets (UMass). Worcester. Massachussets.** "Regualtion of lipid metabolism by miRNAs".
- **Cardiology Grand Rounds. Dartmouth-Hitchcock Medical School. Dartmouth. New Hampshire.** "Control of lipid metabolism by miRNAs: Implication in Cardiovascular diseases".
- **IDIBAPS Seminar. Barcelona University. Barcelona, Spain.** "microRNA in vascular and metabolic disease".
- **CBMSO Seminar. Madrid University. Madrid, Spain**. "MicroRNA functions in vascular and metabolic disease".
- **CNIC Seminar. Madrid, Spain.** "MicroRNA modulation of lipid metabolism, metabolic syndrome, and cardiovascular disease".
- **Vascular Biology and Therapeutics Program and Section of Cardiovascular Medicine special seminar. Yale University. New Haven, USA** . "Molecular Regulation of Lipid Metabolism by miRNA: Role in Cardiometabolic Disease".

2011

- **Gordon Research Conference: Molecular and Cellular Biology of Lipids**, Waterville Valley, NH: "miRNAs as regulators of lipid metabolism".
- **Gordon-Kenan Research Seminar: Endothelial Heterogeneity in Disease**, Salve Regina University, Newport, RI: "Role of endothelial caveolin-1 in the progression of atherosclerosis".
- **British Atherosclerosis Society: MicroRNAs and other Non-Coding RNAs Frontiers in Cardiovascular Research meeting,** Queens' College Cambridge, UK: "MicroRNA-mediated control of cholesterol metabolism".
- **Ernst Klenk Symposium: Novel tools in molecular pathology of metabolic diseases**, Center for Molecular Medicine of the University of Cologne (CMMC), Germany: "MicroRNAs in cholesterol metabolism".
- **Scientific Sessions American Heart Association**. Orlando conference center (Florida), USA: "MicroRNA modulation of cholesterol homeostasis".
- **Mount Sinai Molecular Interactions Discussion Group (SMIDG) seminar series**. "miRNAs modulation of cholesterol homeostasis".
- **Department of Biochemistry. Invited Lecture. Hospital Ramón y Cajal, Madrid.** "miR-33 as a therapeutic target of metabolic symdrome".
- **Consolider invited lecture. San Feliu de Guixols, Barcelona.** "Micro-managing cholesterol metabolism".
- **Department of Cellular and Structural Biology. The University of Texas Health Science Center. San Antonio**. "microRNA modulation of cholesterol homeostasis".
- **Robert M. Berne Cardiovascular Research Center. University of Virginia. Charlottesville**. "Molecular regulation of lipid metabolism by miRNA".
- **RNA Oligonucleotides: Emerging Clinical applications. National Institutes of Health, Rockville, Maryland**. "Potential Therapeutic Approaches in Different Clinical Context: Cardiovascular disease".
- **NIA-sponsored Symposium on "Noncoding RNA in Aging and Age-related disease". Johns Hopkins Bayview Campus, Baltimore, Maryland**. "microRNA regulation of cholesterol metabolism, metabolic syndrome, and cardiovascular disease"

2010

- **Atherosclerosis, Thrombosis and Vascular Biology 2010 Scientific Sessions,** San Francisco, CA: "miR-33 coordinate genes regulating cholesterol homeostasis".
- **Gordon Research Conference: Lipoprotein Metabolism,** Waterville Valley, NH: "Control of lipoprotein metabolism by microRNA".
- **Kern Aspen Lipid Conference: Lipids, inflammation and Stress Reactions in Atherosclerosis: Mechanisms, Imaging and Therapy,** Aspen, CO: "miR-33 coordinates genes regulating lipid homeostasis".
- **Translational Research in Progress (TRIP) Seminar.** "Role of miRNAs in regulating cholesterol homeostasis".

- **Cardiovascular Research Seminars. New York University School of Medicine**. "miRNAs in Cardiovascular disease".
- **Suny Downstate Lipid and Vascular Biology Club. New York.** "miRNAs in cardiovascular disease".
- **Department of Physiology & Biophysics Lecture Series. Boston University School of Medicine .** "miR-33 as a therapeutic target for metabolic syndrome"
- **GICD/CVRI Seminar Series, Gladstone Institute of Cardiovascular Research**. "miR-33 as a therapeutic target for metabolic syndrome".

2009

- **Ramón Areces International Symposium: Cholesterol: metabolism, actions and diseases,** Madrid, Spain: "New models for atherosclerosis studies".

2008

- **Invited Lecture in the XXI Conference of the Spanish Society of Atherosclerosis. Madrid. Spain.** "New insights into the progression of atherosclerosis".

PEER-REVIEWED PRESENTATIONS & SYMPOSIA GIVEN AT MEETINGS NOT AFFILIATED WITH YALE:

- **Keystone Symposium: Metabolism and Cardiovascular Risk (September, 2008),** Breckenridge, CO: "Endothelial Caveolin-1 regulates the progression of atherosclerosis by controlling LDL infiltration, expression of vascular adhesion molecules and production of nitric oxide".
- **Vascular Matrix Biology and Bioengineering Workshop, NAVBO, (October, 2011)**, Hyannis, MA: "miR-33a/b contributes to the regulation of fatty acid metabolism and insulin signaling".
- **4th International Conference on the Biology, Chemistry and Therapeutic Applications of Nitric Oxide (July, 2006)**, Monterrey, CA. "Identification of Golgi localized DHHC-acyl-transferase enzymes that catalyze the palmitoylation and function of endothelial nitric oxide synthase".

PROFESIONAL SERVICE

Peer Review Groups/Grant Study Sections:

2009-present. Basic Cell Committee Member. **American Heart Association (AHA)**
2011. Ad hoc reviewer Vascular and Cell and Molecular Biology Study Section (VCMB). **National Institutes of Health (NIH).**
2011-present. Evaluation Committee member of joint translational call for "Integrated Research on Genomics and Pathophysiology of the Metabolic Syndrome and the Disease arising from it". **Agence Nationale Recherche** (France).
2011. Scientific Evaluation member of a ProDoc (Doctoral Programme). **The Swiss National Science Foundation** (SNSF) and **the Rector's Conference of Swiss Universities** (CRUS).
2011. Scientific Evaluation member of the **NOW Division for Chemical Sciences** (CW). Netherlands
2012-present. Ad hoc reviewer Clinical and Integrative Cardiovascular Sciences Study Section (CICS). **National Institutes of Health (NIH).**
2012-present. Editorial Advisory Board Member. miRNAs Diagnostics and Therapeutics.
2012. Scientific Evaluation member of **the Austrian Science Fund** (FWF).
2012. Ad hoc reviewer NIH SRO, National Institute of Child & Human Development. **National Institutes of Health (NIH).**
2012. Ad hoc reviewer Integrative Nutrition Metabolic Processes Study Section (INMP). **National Institutes of Health (NIH).**
2013. Ad hoc reviewer Integrative Nutrition Metabolic Processes Study Section (INMP). **National Institutes of Health (NIH).**
2013. Ad hoc reviewer Integrative Nutrition Metabolic Processes Study Section (INMP). **National Institutes of Health (NIH).**
2014. Ad hoc reviewer RFA (Basic Research on the Pathogenesis of HIV-Related Heart, Lung, and Blood (HBL) Disease in Adults and Children (R01). **National Institutes of Health (NIH).**

2014-2020. Permanent member Integrative Nutrition Metabolic Processes Study Section (INMP). **National Institutes of Health (NIH).**
2015. Co-Chair Basic Cell Committee Member. **American Heart Association (AHA).**
2015. Ad hoc reviewer "Ramon y Cajal" Program. Ministerio de Economia y Competitividad. Spain.
2015. Ad hoc reviewer **European Research Council. European Union (EU)**.

JOURNAL SERVICE
Journal Reviewer: Cell Metabolism, Molecular Cell, Nature Communications, EMBO Molecular Medicine, Journal of Clinical Investigation, EMBO journal, EMBO Reports, PNAS, Circulation, Circulation Research, Metabolism, Atherosclerosis Thrombosis and Vascular Biology, Atherosclerosis, Inflammation, PLoS One, American Heart Journal, Physiological Genomics, FEBS Letters, Hepatology, Journal of Molecular Cellular Cardiology, Molecular and Cellular Biology, Trends in Cardiovascular Medicine, Journal of Immunology, European Heart Journal, American Journal of Pathology, FASEB journal, Trends in Endocrinology and Metabolism and RNA biology, GENE, Nature Reviews Cardiology, Experimental Cell Research, Clinical and Translational Oncology.
Journal Editor:
- Guest editor, Special Issue on "microRNAs and lipid/energy metabolism and related diseases". BBA Molecular and Cell Biology of Lipids. 2015.

PROFESSIONAL SERVICE FOR PROFESSIONAL ORGANIZATIONS
- Elected Chair, Atherosclerosis Gordon Research Conference. 2019.
- Elected Vice-Chair, Atherosclerosis Gordon Research Conference. 2017.
- President New York Lipid and Vascular Biology Club. Rockefeller University. 2012.

YALE UNIVERSITY SERVICE
Departmental Committees:
- Yale University School of Medicine. Appointments and Promotion Committee. Section Comparative Medicine. 2014-present.
- Yale University School of Medicine. Co-organization Vascular Biology and Therapeutics Seminar Series.

Public Service:
N/A

BIBLIOGRAPHY
NOTE: Due to a high volume of authors with the same initials, I wanted to distinguish myself by additionally adding by mother`s maiden name to publications post-2004. Therefore, peer-reviewed publications are listed both under Fernández, Carlos and Fernández-Hernando, Carlos.

Peer-Reviewed Original Reseach:
1. Dose-dependent effects of lovastatin on cell cycle progression. Distinct requirement of cholesterol and non-sterol mevalonate derivatives. Martínez-Botas J, Ferruelo AJ, Suárez Y, **Fernández C**, Gómez-Coronado D, Lasunción MA. ***BBA Mol Cell Lipid****.* 2001; 1532: 185-194.

2. Differential effects of ergosterol and cholesterol on Cdk1 and SRE-driven transcription: Sterol specificity for cell cycle progression in human cells. Suárez Y, **Fernández C**, Ledo B, Ferruelo AJ, Martín M, Vega MA, Gómez-Coronado D, Lasunción MA. ***Eur J Biochem****.* 2002; 269: 1671-1771.

3. Inhibition of cholesterol biosynthesis by Δ^{22}-unsaturated phytosterols via competitive inhibition of sterol Δ^{24}-reductase in mammalian cells. **Fernández C**, Suárez Y, Ferruelo AJ, Gómez-Coronado D, Lasunción MA. ***Biochem J****.* 2002; 366:109-119.

4. Efecto de los fitosteroles sobre la biosíntesis de colesterol y la proliferación en células humanas. **Fernández C**, M. Martín, Gómez-Coronado D, Lasunción MA. ***Clin Invest Arterios****.* 2003; 5: 175-183.

5. Characterization of an anandamide degradation system in prostate epithelial PC-3 cells. Ruiz-Llorente L, Ortega-Gutiérrez S, Viso A, Sánchez MG, Sánchez AM, **Fernández C**, Ramos JA, Hillard C, Lasunción MA, López-Rodriguez ML, Díaz-Laviada I. Synthesis of new transporter inhibitors as tools for this study. ***Br J Pharmacol***. 2004: 141: 457-467.

6. Synergistic upregulation of low-density-lipoprotein receptor activity by tamoxifen and lovastatin. **Fernández C*****, Suárez Y*****,** Gómez-Coronado D, Ferruelo AJ, Dávalos A, Martínez-Botas J, Lasunción MA. (*equal contribution). ***Cardiovasc Res***. 2004: 64: 346-355.

7. Cholesterol is essential for mitosis pogression and its absence induces polyploid cell formation. **Fernández C**, Lovo MT, Gómez-Coronado D, Lasunción MA. ***Exp Cell Res***. 2004: 300: 109-120.

8. Effects of distal cholesterol biosynthesis inhibitors on cell proliferation and cell cycle progresión. **Fernández C**, Martín M, Gómez-Coronado D, Lasunción MA. ***J Lipid Res***. 2005: 46(5): 920-9.

9. Sterol stringency of proliferation and cell cycle progression in human cells. Suárez Y, **Fernández C**, Ledo B, Martín M, Gómez-Coronado D, Lasunción MA. ***BBA Mol Cell Lipid***. 2005; 1734: 203-213.

10. Lovastatin-induced PC-12 differentiation is associated with RhoA/RhoA kinase pathway inactivation. **Fernández-Hernando C*****, Suárez Y*****, Lasunción MA. (*equal contribution). ***Mol Cell Neurosci***. 2005; 29: 591-602. PMID:15951198.

11. Red grape juice polyphenols alter cholesterol homeostasis and increase LDL-receptor activity in human cells in vitro. Dávalos A, **Fernández-Hernando C**, Cerrato F, Martínez-Botas J, Gómez-Coronado D, Gómez-Ciordovés C, Lasunción MA. ***J Nutr***. 2006; 136: 1766-1773. PMID:16772435.

12. Identification of Golgi localized DHHC-acyl-transferase enzymes that catalyze the palmitoylation and function of endothelial nitric oxide synthase. **Fernández-Hernando C**, Fukata M, Bernatchez PN, Fukata Y, Lin MI, Bredt DS, Sessa WC. ***J Cell Biol***. 2006; 174(3): 369-377. PMCID:PMC2064233.

13. Dicer regulation of gene expression and functions in human endothelial cells. Suárez Y, **Fernández-Hernando C**, Pober JS and Sessa WC. ***Circ Res***. 2007; 100(8): 1164-1173. PMID:17379831.

14. Cholesterol starvation induces differentiation of human leukaemia HL60 cells. Sánchez-Martín Carolina C, Dávalos A, Martín-Sánchez C, de la peña G, **Fernández-Hernando C** and Lasunción MA. ***Cancer Research***. 2007; 67(7): 3379-3386. PMID:17409448.

15. Myoferlin regulates vascular endothelial growth factor (VEGF) receptor-2 stability and functions. Bernatchez PN, Acevedo L, **Fernández-Hernando C**, Murata T, Chalouni C, Erdlument-Bromage H, Shah V, Gratton JP, McNally EM, Tempst P and Sessa WC. ***J Biol Chem***. 2007. 282(42); 30745-53. PMID:17702744.

16. Loss of Akt1 leads to severe atherosclerosis and occlusive coronary artery disease. **Fernández-Hernando C**, Ackah E, Yu J, Suárez Y, Murata T, Iwakiri Y, Prendergast J, Miao RQ, Birnbaum MJ and Sessa WC. ***Cell Metab***. 2007; 6: 446-457. PMCID:PMC3621848.

17. Prohibitin maintains the angiogenic capacity of endothelial cells by regulating mitochondrial function and senescence. Schleicher M, Shepherd BR, Suárez Y, **Fernández-Hernando C**, Yu J, Pan Y, Acevedo L Shadel GS and Sessa WC. ***J Cell Biol***. 2008; 101-112. PMCID:PMC2213620.

18. Phospholipase C b3 deficiency leads to macrophage hypersensitivity to apoptotic induction and reduction of atherosclerosis in mice. Wang Z, Liu B, Wang P, Dong X, **Fernández-Hernando C**, Li Z, Hla T, Li Z, Claffey K, Smith JD and Wu D. ***J Clin Invest***. 2008; 195-204. PMCID:PMC2129238.

19. Dicer-dependent endothelial microRNAs are necessary for post-natal angiogenesis. Suárez Y, **Fernández-Hernando C**, Yu J, Gerber SA, Harrison KD, Pober JS, Iruela-Arispe ML, Merkenschlager M and Sessa WC. ***Proc Natl Acad Sci USA***. 2008; 105: 14082-14087. PMCID:PMC2544582.

20. Dose-dependent dual effects of cholesterol and desmosterol on J774 macrophage proliferation.Rodriguez-Acebes S, de la Cueva P, Ferruelo AJ, **Fernández-Hernando C**, Lasunción MA, Rawson RB, Martínez-Botas J and Gómez-Coronado D. ***Biochem Biophys Res Commun***. 2008; 377: 484-488. PMID:18851952.

21. Endothelial Caveolin-1 regulates pathological angiogenesis in a mouse model of colitis. Chidlow JH, Greer JM, Anthoni C, Bernatchez PN, **Fernández-Hernando C**, Bruce M, Addelbaqi M, Shukla D, Granger, Sessa WC and Kevil CG. ***Gastroenterology***. 2009 Feb; 136(2): 575-584. PMCID:PMC3667411.

22. Desmosterol can replace cholesterol in sustaining cell proliferation and regulating the SREBP pathway in a sterol Δ^{24}-reductase deficient cell line. Rodriguez-Acebes S, de la Cueva P, **Fernández-Hernando C**, Ferruelo AJ, Lasunción MA, Rawson RB, Martínez-Botas J and Gómez-Coronado D. ***Biochem J***. 2009 May; 420 (2): 305-15. PMCID:PMC2931812.

23. Akt1 is necessary for vascular leakage during acute inflammation. Di Lorenzo A, **Fernández-Hernando C,** Cirino G and Sessa WC. ***Proc Natl Acad Sci. USA.*** 2009 Aug; 106 (34): 14552-7. PMCID:PMC2732859.

24. Genetic evidence supporting a critical role of endothelial caveolin-1 during the progression of atherosclerosis. **Fernández-Hernando C#**, Yu J, Suárez Y, Rahner C, Dávalos A, Lasunción MA and Sessa WC**#**. (**#** corresponding author). ***Cell Metab***. 2009 Jul; 10: 48-54. PMCID:PMC2735117.

25. Nogo-B receptor stabilizes Niemann-Pick Type C2 protein and regulates intracellular cholesterol trafficking. Harrison KD, Miao RQ, **Fernández-Hernando C**, Suárez Y, Dávalos A and Sessa WC. ***Cell Metab***. Sep 2009; 10(3): 208-18. PMCID:PMC2739452.

26. Reticulon 4B (Nogo-B) is necessary for macrophage infiltration and inflammatory tissue repair. Yu J, **Fernández-Hernando C**, Suárez Y, Schleicher M, Hao Z, Wright P, Kyriakides and Sessa WC. ***Proc Natl Acad Sci. USA.*** 2009. Oct 13; 106 (41): 17511-6. PMCID:PMC2762666.

27. Absence of Akt1 reduces vascular smooth mucle cell migration and survival and induces features of plaque vulnerability and cardiac dysfunction during atherosclerosis. **Fernández-Hernando C**, Jósef L, Jenkins D, Di Lorenzo A and Sessa WC. ***Arterioscler. Thromb. Vasc. Biol.*** 2009. Dec 29 (12): 2033-40. PMCID:PMC2796372.

28. Haloperidol disrupts lipid rafts and impairs insulin signaling in SH-SY5Y cells. Sánchez-Wandelmer J, Dávalos A, de la Peña G, Cano S, Giera M, Canfrán-Duque A, Bracher F, Martín-Hidalgo A, **Fernández-Hernando C**, Lasunción MA, Busto R. ***Neuroscience***. 2010. Apr 28; 167(1): 143-53. PMC:20123000.

29. ABCG1 and HDL promote endothelial nitric oxide synthesis through a decrease in the interaction of caveolin-1 and endothelial nitric oxide synthase. Teresaka N, Westerterp M, Koetsveld J, **Fernández-Hernando C,** Yvan-Charvet L, Wang N, Sessa WC, and Tall AR. ***Arterioscler. Thromb. Vas. Biol***. 2010. Nov; 30(11): 2219-25. PMC:20798376.

30. Quantitative proteomics of caveolin-1 regulated proteins: Characterization of PTRF/Cavin-1 in endothelial cells.Dávalos A**,** **Fernández-Hernando C**, Sowa G, Derakhshan B, Lin MI, Lee JY, Colangelo C, Sessa WC. ***Moll Cell Proteomics.*** 2010. Oct; 9(10): 2109-24. PMCID:PMC2953909.

31. Endothelial-specific overexpression of Caveolin-1 accelerates atherosclerosis in apolipoprotein E-deficient mice. **Fernández-Hernando C**, Yu J, Dávalos A, Prendergast J and Sessa WC. ***Am J Pathol***. 2010. Aug; 177(2): 998-1003. PMCID:PMC2913373.

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