Ángel Fernández Trasancos

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1. Education

University of Santiago de Compostela, Spain

2011-2017

- PhD in Biomedical Sciences.

2010-2011

- Master's degree in Biomedical Research.

2005-2010

- Degree in Biology (Molecular Biology and Biotechnology).

2. Research experience

Spanish National Centre of Cardiology Research (CNIC), Madrid, Spain.

Jan 2018-Present

- Postdoc Researcher at Molecular Mechanics of Cardiovascular System.
  Supervisor: Jorge Alegre Cebollada.

Cardiology Laboratory, Health Research Institute of Santiago, Spain.

Sep 2011-Jun 2017

- PhD student at the Cardiology Laboratory. Thesis Project: Cellular, molecular and physiological characterization of epicardial adipose tissue. Directors: José Ramón González Juanatey, Ángel Luis Fernández González and Sonia Eiras Penas.

University of Santiago de Compostela, Spain.

Oct 2010-Jul 2011

- Master's thesis project at Neuroendocrinology, Energy Homeostasis, Metabolism and Cancer. Project: Obesity as a Cancer inductor

Sep 2009-Oct 2010

- Undergraduate Research Internship at Neuroendocrinology, Energy Homeostasis, Metabolism and Cancer. Project: Obesity as a Cancer inductor.

3. Research skills

- Cell culture techniques: primary cells isolation from adipose and vascular tissues. Adipocytes, preadipocytes, smooth muscle and endothelial cell culture, differentiation process and gene expression. Cell viability and proliferation endpoint and real time assays (MTT, AlamarBlue® and xCELLigence® RTCA). Imaging techniques.

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- Molecular biology techniques: nucleic acids isolation and quantification, plasmid and genomic DNA isolation. cDNA synthesis, real time PCR. Protein isolation and quantification, Bradford, SDS-PAGE assays. Cloning and expression: construct design, primer handling, PCR fragments purification.
- Immunological techniques: Immune cell isolation. Immunofluorescence, ELISA, Flow cytometry, 2D-Electrophoresis (2D-PAGE), 1D and 2D Western blot. Immunohistochemistry and immunocytochemistry.
- Processing of biological specimens for analysis: human blood, tissue specimens, frozen and paraffin-embedded tissue.
- Animal skills: mouse breeding and handling, obese and diabetic mouse model characterization, ip injection, dissection and tissue processing. Porcine heart dissection, adipose and vascular tissue processing.
- Data processing, statistical analyses and database skills.

4. Additional skills & training

- Ability to work independently or with a team in a fast-paced work environment.
- Good written and verbal communication skills.
- Language: Spanish and Galician (native). Fluent oral and written in English.
- Computer: Microsoft Office, Adobe Photoshop, Prism, Quantity One and FlowJo,
- Courses:
  - Jun 2017: Metabolism: From Brain to Periphery. Universidad Rey Juan Carlos I.
  - Sep 2016: Mechanotherapeutics: From Drugs to Wearables. Wyss Institute, Boston
  - Mar 2016: El arte de las presentaciones conceptuales, Escuela Inventa, Santiago Compostela
  - Jun 2016: Presentaciones de Alto Impacto, Universidad Santiago de Compostela.
  - Apr 2014: Molecuar Basis of Human Disease, L' Ecole Doctorale Biologie y USC.

5. Publications

1. Ángel Fernández Trasancos; Rosa María Agra Bermejo; José María García Acuña; Ángel Luis Fernández, González; José Ramón González Juanatey; Sonia Eiras Penas. *Omentin on epicardial fat improves its anti-inflammatory activity and paracrine benefit over smooth muscle cells*. Obesity (Silver Spring). 2017 Jun;25(6):1042-1049. doi: 10.1002/oby.21832

2. Ángel Fernández Trasancos; Raquel Guerola Segura; Beatriz Paradela Dobarro; Ezequiel Álvarez; José María García Acuña; Ángel Luis Fernández; José Ramón González Juanatey; Sonia Eiras. *Glucose and Inflammatory Cells Decrease Adiponectin in Epicardial Adipose Tissue Cells: Paracrine Consequences on Vascular Endothelium*. J Cell Physiol. 2016 May;231(5):1015-23. doi: 10.1002/jcp.25189

3. Ángel Fernández Trasancos; Rubén Fandiño Vaquero; Rosa María Agra; Ángel Luis Fernández; Juan E Viñuela; José Ramón González Juanatey; Sonia Eiras. *Impaired adipogenesis and insulin resistance in epicardial fat-mesenchymal cells from patients with cardiovascular disease. J Cell Physiol. 2014 Nov;229(11):1722-30. doi: 10.1002/jcp.24619.*

4. *Rubén Fandiño Vaquero; *Ángel Fernández Trasancos; Ezequiel Álvarez; Samah Ahmad; Ana Lucía Batista Oliveira; Belén Adrio; Ángel Luis Fernández; José Ramón González Juanatey; Sonia Eiras. *Orosomucoid secretion levels by epicardial adipose tissue as possible indicator of endothelial dysfunction in diabetes mellitus or inflammation in coronary artery disease*. Atherosclerosis. 2014 Aug;235(2):281-8. doi: 10.1016/j.atherosclerosis.2014.05.921 *Equal contribution.

5. Rosa María Agra; Ángel Fernandez-Trasancos; Esther Diaz- Rodriguez; Alberto Cordero; Alfonso Varela-Roman; J Nicolás Lopez-Canoa; Inés Gomez-Otero; Ángel Luis Fernandez; Jose M Martinez-Cereijo; Jose Ramón Gonzalez-Juanatey; Sonia Eiras. *Nutrients restriction upregulates adiponectin in epicardial or subcutaneous adipose tissue: impact in de novo heart failure*. International Journal of Medical Sciences. ACCEPTED 24/11/2017.

6. Ricardo Lage; Isabel Moscoso; Ángel Fernández Trasancos; María Cebro; Marinela Couselo; Rubén Fandiño Vaquero; Susana B Bravo; Juan Sierra; José Ramón González Juanatey; Sonia Eiras. *Differential behavior of epicardial adipose tissue-secretomes with high and low orosomucoid levels from patients with cardiovascular disease in H9C2 cells*. Mol Cell Endocrinol. 2015 Nov 15;416:77-87. doi: 10.1016/j.mce.2015.08.025

7. Paradela-Dobarro B, Fernández-Trasancos Á, Bou-Teen D, Eiras S, González-Ferreiro R, Agra RM, Varela-Román A, Castro-Pais AI, Carreira MC, Casanueva FF, Álvarez E, González-Juanatey JR *Evolution and bad prognostic value of advanced glycation end products after acute heart failure: relation with body composition*. Cardiovasc Diabetol. 2017 Sep 15;16(1):115. doi: 10.1186/s12933-017-0598-3.

8. Rosa María Agra; Ángel Fernández Trasancos; Juan Sierra; José Ramón González Juanatey; Sonia Eiras. *Differential association of S100A9, an inflammatory marker, and p53, a cell cycle marker, expression with epicardial adipocyte size in patients with cardiovascular disease*. Inflammation. 2014 Oct;37(5):1504-12. doi: 10.1007/s10753-014-9876-3.

9. Rosa M Agra; Alfonso Varela Román; Rocío González Ferreiro; Juan E Viñuela; Ana Castro Pais; Ángel Fernández Trasancos; Esther Díaz Rodríguez; Ezequiel Álvarez; Marcos C Carreira; Felipe F Casanueva; José R González Juanatey; Sonia Eiras. *Orosomucoid as prognosis factor associated with inflammation in acute or*

nutritional status in chronic heart failure. Int J Cardiol. 2017 Feb 1;228:488-494. doi: 10.1016/j.ijcard.2016.11.134.

10. Rosa María Agra; Elvis Teijeira Fernández; Domingo Pascual Figal; Sánchez-Más Jesús; Ángel Fernández Trasancos; Juan Sierra; José Ramón González Juanatey; Sonia Eiras. *Differential behavior between S100A9 and adiponectin in coronary artery disease. Plasma or epicardial fat. Mol Cell Endocrinol. 2015 Nov 15;416:77-87. doi: 10.1016/j.mce.2015.08.025.*
11. Rosa M Agra; Elvis Teijeira Fernández; Domingo Pascual Figal; Jesús Sánchez Más; Ángel Fernández Trasancos; José R González Juanatey; Sonia Eiras. *Adiponectin and p53 mRNA in epicardial and subcutaneous fat from heart failure patients*. Eur J Clin Invest. 2014 Jan;44(1):29-37. doi: 10.1111/eci.12186.
12. Sonia Eiras; Alfonso Varela Román; Mariléia Cháves Andrade; Ana Castro; Rocío González Ferreiro; Juan E Viñuela; Ángel Fernández Trasancos; Marcos C Carreira; Ezequiel Álvarez; Felipe F Casanueva; José R González Juanatey. *Non classical Monocytes Levels, Increased by Subcutaneous Fat-Secretome, Are Associated with Less Rehospitalization after Heart Failure Admission*. J Cardiovasc Transl Res. 2017 Feb;10(1):16-26. doi: 10.1007/s12265-016-9724-y.
13. Sara Mena Bueno; Miroslava Atanasova; Ángel Fernández Trasancos; Beatriz Paradela Dobarro; Susana B Bravo; Ezequiel Álvarez; Ángel L Fernández; Iván Carrera; José R González Juanatey; Sonia Eiras. *Sea cucumbers with an anti-inflammatory effect on endothelial cells and subcutaneous but not on epicardial adipose tissue*. Food Funct. 2016 Feb;7(2):953-63. doi: 10.1039/c5fo01246e.

6. Oral Communications and relevant poster presentations

- Santiago de Compostela, Galicia, Spain. Biointregrasaúde 2016 12/05/2016 Instituto Investigación Biosanitaria de Santiago de Compostela. *La omentina reduce la inflamación y favorece la acción de la insulina en tejido adiposo epicárdico de pacientes con enfermedad cardiovascular*.
- Bilbao, Basque Country, Spain. SEC2015: El congreso de las enfermedades cardiovasculares. Sociedad Española de Cardiología. 23/10/2015. *Las células del tejido adiposo epicárdico disfuncional potencia la inflamación del endotelio mediada por glucosa o células inflamatorias.*
- Santiago de Compostela, Galicia, Spain. SEC2014: Congreso de las Enfermedades Cardiovasculares. 29/10/2014. Sociedad Española de Cardiología. *La hiperglucemia y medio condicionado por macrófagos afectan a la formación de grasa epicárdica en pacientes con enfermedad cardiovascular*.
- Burdeos, Aquitaine, France. 7th IECB Young Scientist Symposuim. 19/05/2014. *Differential role between epicardial and subcutaneous fat-mesenchymal cells regarding insulin effect, adipogenesis and inflammation. From Cells to patients with cardiovascular disease*.

- Nantes, Pays de la Loire, France. Scientific Forum of Doctoral School Nantes, Université de Nantes, École Doctorale Biologie-Sante.. 09/12/2013. *Insulin resistance, impaired adipogenesis and inflammatory response in epicardial fat cell. From cells to patients with coronary artery disease risk factors*.
- Valencia, Spain. SEC2013: El Congreso de las Enfermedades Cardiovasculares 24/10/2013 Sociedad Española de Cardiología. *Resistencia de las células mesenquimales de la grasa epicárdica a la hiperglucemia: Acercamiento a la relación entre diabetes y enfermedad cardiovascular.*
- Santiago de Compostela, Galicia, Spain. 25º Congreso de la Sociedad Gallega de Endocrinología, Nutrición y Metabolismo. 08/11/2012. *Estudio de los mecanismos y efectos adipogénicos de la administración crónica de insulina en cultivo primario de tejido adiposo epicárdico y subcutáneo*.
- Sevilla, Andalucía, Spain. SEC2012: El Congreso de las Enfermedades Cardiovasculares. 18/10/2012. Sociedad Española de Cardiología. *Estudio de los mecanismos y efectos adipogénicos de la administración crónica de insulina en cultivo primario del tejido adiposo epicárdico y subcutáneo.*
- Vigo, Galicia, Spain. V Jornada de Investigación Biomédica de Vigo 31/05/2012. *Estudio de los mecanismos y efectos adipogénicos de la administración crónica de insulina en cultivo primario del tejido adiposo epicárdico y subcutáneo.*

7. Fellowships and Special awards

- 2015-2017: "IDIS Pre-doctoral fellowship"
- 2015: "Roche Special Award" in the international Scientific Photography Contest "InvestigARTE".