

Part A. PERSONAL INFORMATION

CV date 28/11/2022

First and Family name	Francisco Javier Martín Romero		
Social Security, Passport, ID number		Age	
Researcher codes	Open Researcher and Contributor ID (ORCID**)	0000-0001-6796-7396	
	SCOPUS Author ID (*)	6602387744	
	WoS Researcher ID (*)	A-7682-2012	

(*) Optional (**) Mandatory

A.1. Current position

Name of University/Institution	Universidad de Extremadura		
Department	Biochemistry and Molecular Biology and Genetics. School of Life Sciences		
Address and Country	Avenida de Elvas s/n		
Phone number	924489971	E-mail	fjmartin@unex.es
Current position	Full Professor of Biochemistry and Molecular Biology	From	27-10-2020
Key words	Ca ²⁺ , cytoskeleton, signaling, STIM1, ORAI1, posttranslational modifications		

A.2. Education

PhD, Licensed, Graduate	University	Year
Graduate in Biology	Universidad de Extremadura	1993
PhD in Biological Sciences	Universidad de Extremadura	1998

A.3. General indicators of quality of scientific production (see instructions)

4 terms of "six-years of research" (last granted term: 2014-2019).

6 Ph.D. Thesis supervised in the last 10 years.

2055 cites, H index: 25.

Part B. CV SUMMARY (max. 3500 characters, including spaces)

Ph.D. in Biological Sciences in 1998. Assistant Professor (1999), Associate Professor (2010), and Full Professor (2020) at the Department of Biochemistry and Molecular Biology, University of Extremadura. Postdoctoral Fellow at the National Cancer Institute (NCI/NIH), Bethesda, USA (1999-2001), and Research Associate at the University of Dundee, Dundee, UK (6 months in 2008-2009 and 3 months in 2015).

Group Leader since 2008. Supervisor of 8 PhD Thesis and 4 Thesis currently in progress. Continuous funding since 2008 through competitive calls from MICINN, MINECO, (calls BFU2008, BFU2011, BFU2014, BFU2017, PID2020), Government of Extremadura and University of Extremadura.

As a pre- and post-doctoral researcher the achievements have been (1) The discovery that neuronal apoptosis induced by the repolarization of the plasma membrane is due to an abortive re-entry in the cell cycle; (2) The development of a genomic search tool for the localization of ORFs for selenoproteins *in silico* and the discovery and characterization of 2 Drosophila selenoproteins (BthD and G-rich) (2001); (3) Description of the molecular basis by which dietary selenium regulates the expression of selenoproteins in Drosophila (2001); (4) Description of the superoxide anion generated by plasma membrane ascorbate-dependent NADH-oxidase as an initiator of neuronal apoptosis.

As an independent researcher the achievements are summarized in: (1) The discovery that Ca²⁺ store-operated entry (SOCE) is an active pathway in human oocytes (2008) and its role in the maintenance of Ca²⁺ waves during fertilization (2009) and in vitro maturation of mouse oocytes (2012); (2) The identification of new STIM1 phosphorylated residues (Ser575, Ser608 and Ser621) as targets of ERK1/2 activity and that phosphorylation of these residues is



required for SOCE activation (2010); (3) Identification of the phospho-regulation of STIM1-microtubule interaction (2013); (4) Identification of phospho-STIM1 as a key regulator of cell migration in response to EGF (2015) and in IGF-1-dependent signaling; (5) Identification of the role of STIM1 and ORAI1 in the leading edge of migrating cells to regulate plasma membrane ruffling (2017); (6) Involvement of STIM1 in the normalization of cell viability in a neuronal model and description of the association between STIM1 loss and sporadic Alzheimer; (7) Identification of STIM1 as a key regulator for the Ca²⁺ shuttling between endoplasmic reticulum and mitochondria in neuronal in vitro models (2020).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (see instructions). 11 selected articles.

Poejo J, Orantos-Aguilera Y, **Martin-Romero FJ**, Mata AM, Gutierrez-Merino C. (2022) Internalized Amyloid- β (1-42) Peptide Inhibits the Store-Operated Calcium Entry in HT-22 Cells.

Pascual-Caro C, Orantos-Aguilera Y, Sanchez-Lopez I, de Juan-Sanz J, Parys JB, Area-Gomez E, Pozo-Guisado E, **Martin-Romero FJ** (2020) STIM1 deficiency leads to specific down-regulation of ITPR3 in SH-SY5Y cells. *Int. J. Mol. Sci.* 9;21(18):6598.

Lopez-Guerrero AM, Espinosa-Bermejo N, Sanchez-Lopez I, et al, & **Martin-Romero FJ** (2020) RAC1-dependent ORAI1 translocation to the leading edge supports lamellipodia formation and directional persistence. *Sci. Rep.* 10(1):6580.

Pascual-Caro C, Berrocal M, Lopez-Guerrero AM, Alvarez-Barrientos A, Pozo-Guisado E, Gutierrez-Merino C, Mata AM, **Martin-Romero FJ** (2018) STIM1 deficiency is linked to Alzheimer's disease and triggers cell death in SH-SY5Y cells by upregulation of L-type voltage-operated Ca(2+) entry. *J. Mol. Med. (Berl)* 96(10):1061-1079.

Lopez-Guerrero AM, Pascual-Caro C, **Martin-Romero FJ**, Pozo-Guisado E (2017) Store-operated calcium entry is dispensable for the activation of ERK1/2 pathway in prostate cancer cells. *Cell. Signal.* 40:44-52.

Lopez-Guerrero AM, Tomas-Martin P, Pascual-Caro C, Macartney T, Rojas-Fernandez A, Ball G, Alessi DR, Pozo-Guisado E, **Martin-Romero FJ** (2017) Regulation of membrane ruffling by polarized STIM1 and ORAI1 in cortactin-rich domains. *Sci. Rep.* 7(1):383

Tomas-Martin P, Lopez-Guerrero AM, Casas-Rua V, Pozo-Guisado E, **Martin-Romero FJ**. (2015) Phospho-STIM1 is a downstream effector that mediates the signaling triggered by IGF-1 in HEK293 cells. *Cell. Signal.* 27(3):545-554.

Casas-Rua V, Tomas-Martin P, Lopez-Guerrero AM, Alvarez IS, Pozo-Guisado E, **Martin-Romero FJ**. (2015) STIM1 phosphorylation triggered by epidermal growth factor mediates cell migration. *BBA-Mol. Cell. Res.* 1853(1):233-243

Casas-Rua V, Alvarez IS, Pozo-Guisado E, **Martin-Romero FJ** (2013) Inhibition of STIM1 phosphorylation underlies resveratrol-induced inhibition of store-operated calcium entry. *Biochem. Pharmacol.* 86(11):1555-63.

Pozo-Guisado E, Casas-Rua V, Tomas-Martin P, Lopez-Guerrero AM, Alvarez-Barrientos A, **Martin-Romero FJ**. (2013) Phosphorylation of STIM1 at ERK1/2 target sites regulates interaction with the microtubule plus-end binding protein EB1. *J. Cell. Sci.* 126:3170-80.

Pozo-Guisado E, Campbell DG, Deak M, Alvarez-Barrientos A, Morrice NA, Alvarez IS, Alessi DR, **Martin-Romero FJ**. (2010) Phosphorylation of STIM1 at ERK1/2 target sites modulates store-operated calcium entry. *J. Cell. Sci.* 123:3084-9



C.2. Research projects

*Reference: PID2020-112997GB-I00

Title: **Nuclear function of the Ca²⁺ channel regulator STIM1 on DNA repair and genomic stability. Involvement in the Fanconi anemia pathway.**

PI: Francisco Javier Martín Romero

Funding agency: Spanish Agencia Estatal de Investigación.

Start-End: 01/09/2021-31/08/2024. Granted funding: 121.000 euros.

***Active project**

Reference: BFU2017-82716-P

Title: The role of STIM1 in neuronal differentiation and neurodegeneration: non-canonical activities of STIM1.

PI: Francisco Javier Martín Romero

Funding agency: Spanish Ministerio de Economía y Competitividad.

Start-End: 01/01/2018-31/12/2020. Granted funding: 145.200 euros.

Reference: IB16088

Title: The role of cytoskeleton in the spatial organization of Ca²⁺ signaling in tumour cells.

PI: Francisco Javier Martín Romero

Funding agency: Consejería de Economía e Infraestructuras. Junta de Extremadura.

Start-End: 03/06/2017-02/06/2020. Granted Funding: 149.930 euros.

Reference: BFU2014-52401-P

Title: Post-translational modifications of STIM1 and ORAI1: physiological and pathological consequences.

PI: Francisco Javier Martín Romero

Funding agency: Ministerio de Economía y Competitividad.

Start-End: 01/01/2015-31/12/2017. Granted Funding: 157.300 euros.

Reference: BFU2011-22798

Title: Modulation of store-operated calcium entry by posttranslational modifications of STIM1.

PI: Francisco Javier Martín Romero

Funding agency: Ministerio de Economía y Competitividad

Start-End: 01/01/2012-31/12/2014. Granted Funding: 223.850 euros.

Reference: BFU2008-00104

Title: Ca²⁺-dependent intracellular signaling in fertilization: the contribution of store-operated calcium entry.

PI: Francisco Javier Martín Romero

Funding agency: Ministerio de Ciencia e Innovación

Start-End: 01/01/2009-31/12/2011. Granted Funding: 96.800 euros.

C.3. Contracts, technological or transfer merits

Reference: PCJ1008

Title: Development of new technologies to improve embryo implantation in in vitro fertilization.

PI: Ignacio Santiago Álvarez Miguel

Funding Agency: Junta de Extremadura

Start-End: 06/10/2011-05/10/2015. Granted Funding: 493.218 euros.

C.4. Patents

Inventors: I.S. Alvarez Miguel, M.J. Perianes Carrasco, **F.J. Martin Romero**

Title: Method to evaluate embryo culture media widely used in assisted reproduction techniques based on the capability of embryos to bind growth factors. Number of application: 201231895.

Granted: 03/11/2014. Country: Spain



C.5. PhD Thesis Supervisor (last 10 years)

Title: Regulation of calcium homeostasis and cell viability by STIM1 in the neuroblastoma cell line SH-SY5Y. *Doctoral Excellence Award and International Doctorate Mention.*

Ph.D. student: Carlos Pascual Caro.

University: Universidad de Extremadura. Date: 25/02/2019

Title: Reorganization of the cytoskeleton by STIM1 and ORAI1. *Doctoral Excellence Award and International Doctorate Mention.*

Ph.D. student: Aida M^a López Guerrero

University: Universidad de Extremadura. Date: 21/07/2017

Title: The functional role of ERK1/2-dependent STIM1 phosphorylation: control of cell signaling and cell migration. *Doctoral Excellence Award.*

Ph.D. student: Patricia Tomás Martín

University: Universidad de Extremadura. Date: 04/11/2016

Title: Modulation of cell signaling by STIM1 phosphorylation: physiological consequences.

Ph.D. student: Vanessa Casas Rua

University: Universidad de Extremadura. Date: 25/07/2016

Title: SOCE in human oocytes: clinical implications.

Ph.D. student: Jose Ramón Ortiz de Galisteo Cifuentes

University: Universidad de Extremadura. Date: 22/01/2016

Title: Involvement of store-operated Ca²⁺ entry in cell signaling in mouse oocytes. *Doctoral Excellence Award.*

Ph.D. student: Carolina Gómez Fernández

University: Universidad de Extremadura. Date: 03/06/2010.

C.6. Organization of meetings

- Member of the Scientific Committee of the VII Congress of the Spanish Ion Channel Initiative (RECI), Cáceres, May 2019.

- Member of the Organizing Committee and the Scientific Committee of the XVIII Congress of the Spanish Society for Cell Biology. Badajoz, November 2019.

C.7. Research Assessment

- External Reviewer for the “High Council for the Evaluation of Research and Higher Education” (Hcéres, France) for the evaluation of Research Unit from INSERM (2018-2019).

- External Reviewer for the Wellbeing of Women Research Project Grants 2014-2017.

- External Reviewer for the Austrian Science Fund (FWF) Project Grants (Austria). 2016.

- External Reviewer for Spanish ANEP (Fundamental and Systems Biology Field). 2010-2021.

- External reviewer for the Spanish Fundación Progreso y Salud. Junta de Andalucía. 2011-2020.

C.8. Editorial Board Membership and Review activities

Associate Editor for Molecular Human Reproduction (Oxford University Press) (2014-2017), International Journal of Molecular Sciences (06/2020 – to date), Frontiers in Cell and Developmental Biology (2021- to date). Invited Editor (Topic Editor) in Frontiers in Cellular Neuroscience (2020). Other editorial and activity as a reviewer available at <https://www.webofscience.com/wos/author/record/329318>.