

**IMPORTANT – The Curriculum Vitae cannot exceed 4 pages. Instructions to fill this document are available in the website.**

Part A. PERSONAL INFORMATION		CV date	31/07/2023
First name	JUAN ANTONIO		
Family name	ROSADO DIONISIO		
Gender (*)	MAN	Birth date (dd/mm/yyyy)	03/04/1971
Social Security, Passport, ID number	28942443W		
e-mail	jarosado@unex.es	URL Web	
Open Researcher and Contributor ID (ORCID) (*)	0000-0002-9749-2325		

(\*) Mandatory

### A.1. Current position

Position	Full Professor in Physiology		
Initial date	27/04/2017		
Institution	University of Extremadura		
Department/Center	Physiology	Faculty of Veterinary Medicine	
Country	Spain	Teleph. numb	649030088
Key words	Calcium signaling, cancer, Orai channels		

### A.2. Previous positions (research activity interruptions, indicate total months)

Period	Position/Institution/Country/Interruption cause
1995-1998	FPU fellow/Univ. of Extremadura/Spain
1998-2000	Postdoctoral Res./Univ. of Cambridge/ United Kingdom
2001-2002	Associate Lecturer/ Univ. of Extremadura/ Spain
2002-2017	University Lecturer/ Univ. of Extremadura/ Spain
2017-cont.	Full Professor/ Univ. of Extremadura/ Spain

### A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Degree in Veterinary Medicine	University of Extremadura	1994
Master in Science	University of Extremadura	1994
PhD	University of Extremadura	1997

### Part B. CV SUMMARY (max. 5000 characters, including spaces)

My research career has focused on the study of intracellular Ca<sup>2+</sup> homeostasis, especially store-operated Ca<sup>2+</sup> influx and its relationship with pathologies such as cancer. As a result of my research, I have published **236 scientific articles**, cited more than 8000 times (average of 28 citations/article). Among them, 116 are published in journals of the first quartile of their field, including Blood, Cancer Res., Cell. Mol. Life Sci., J. Physiol. or JCI insights. My **h-index is 51**. I have published **26 book chapters** and 185 meeting abstracts and I have been invited to give more than **20 conferences** by national and international organizations.

I have participated in **2 international R&D projects** (Wellcome Trust, UK). I have been **Principal Investigator (PI) of 5 Grants from the Spanish Ministry (MICINN/AEI)**: BFU2007-60104: € 157,300, BFU2010-21043-C02-01: € 219,010, BFU2013-45564-C2-1-P: € 266,200, BFU2016-74932-C2-1-P: € 278,300 and PID2019-104084GB-C21: € 231.110. The last four projects were Coordinated, where I was the PI coordinator). Previously I participated in 5 more national projects: PB94-1416-CO2-02, SAF2001-0295, BF12001-0624, BFU2004-00165, BF12004-00637. I have been **PI of 7 Joint Research Projects** of the Ministry of Foreign Affairs and Cooperation and **PI of 5 Grants from Junta de Extremadura**, and I have participated in



8 further Grants from Junta de Extremadura and 4 from UEx. In the last 10 years I have been PI of Research and Equipment Grants worth € 2.6M.

Among my most relevant contributions, the characterization of store-operated calcium entry (SOCE) in platelets and other non-excitable cells as well as the remodeling of Orai channel function in tumor cells stand out. I have published seminal articles characterizing: 1) the functional role of the protein STIM1 and the channel Orai1 in native cells, such as human platelets, 2) the role of both Orai1 and TRPC1 as store-operated channels in native cells, 3) the role of plasma membrane resident STIM1 in cell physiology and 4) the relevance of SOCE remodeling, especially the expression and function of STIM1, Orai and TRPC channels, in the pathogenesis of breast cancer. These findings have been of great relevance in later studies by us and others and have given us international collaborations, leadership, and recognition. As an indicator of their influence, it is appropriate to highlight that more than a dozen articles have been cited over 100 times by the most influential authors in the field and I have been invited to give more than 20 conferences by international and national institutions.

I have supervised 12 doctoral theses and more than 30 Master Thesis. The graduated doctors have continued their professional careers as researchers in national and international universities (some of them as university teachers) or pharmaceutical and technology companies. I actively participate in the evaluation of manuscripts for different journals as well as research grants and researchers as a member of the scientific board of the Spanish State Research Agency (AEI) and the Andalusian Agency of Knowledge, among other national and international funding bodies. Finally, I have been panel member of PhDs in the universities of Valladolid, Sevilla, Murcia, Alicante, León, Barcelona and Extremadura.

Besides my teaching activity in the degrees of Veterinary Medicine and Biochemistry at UEx, I am actively involved in dissemination activities aimed at the society, through newspapers and radio, and high school students. Furthermore, I actively collaborate with the public health service through several meetings and talks. I obtained Fundación Caja Extremadura Award for Biomedical Research in 2019 and UEx Excellence Research Award in 2022.

## **Part C. RELEVANT MERITS** (sorted by typology)

### **C.1. Publications** (97 publications in the last 10 years out of a total of 236. 10 selected)

**1** Sanchez-Collado J, Lopez JJ, Jardin I, Berna-Erro A, Camello PJ, Cantonero C, Smani T, Salido GM, **Rosado JA (AC)**. (9/9). 2022. Orai1 $\alpha$ , but not Orai1 $\beta$ , co-localizes with TRPC1 and is required for its plasma membrane location and activation in HeLa cells. Cell Mol Life Sci 79(1):33. IF: 9.207.

**2** Sanchez-Collado J, Lopez JJ, Cantonero C, Jardin I, Regodon S, Redondo PC, Gordillo J, Smani T, Salido GM, **Rosado JA (AC)**. (10/10). 2021. Orai2 Modulates Store-Operated Ca<sup>2+</sup> Entry and Cell Cycle Progression in Breast Cancer Cells. Cancers 14(1), 114 IF: 6.575.

**3** Jardin I, Diez-Bello R, Falcon D, Alvarado S, Regodon S, Salido GM, Smani T, **Rosado JA (AC)**. (8/8). 2021. Melatonin downregulates TRPC6, impairing store-operated calcium entry in triple-negative breast cancer cells. J Biol Chem. 296:100254. IF: 5.486.

**4** Soulet F, Bodineau C, Hooks KB, Descarpentrie J, Alves I, Dubreuil M, Mouchard A, Eugenie M, Hoepffner JL, López JJ, **Rosado JA**, Soubeyran I, Tomé M, Durán RV, Nikolski M, Villoutreix BO, Evrard S, Siegfried G, Khatib AM. (11/19). 2020. ELA/APELA precursor cleaved by furin displays tumor suppressor function in renal cell carcinoma through mTORC1 activation. JCI Insight 5(14):e129070. IF: 8.315.

**5** Tomé M, Pappalardo A, Soulet F, López JJ, Olaizola J, Leger Y, Dubreuil M, Mouchard A, Fessart D, Delom F, Pitard V, Bechade D, Fonck M, **Rosado JA**, Ghiringhelli F, Déchanet-Merville J, Soubeyran I, Siegfried G, Evrard S, Khatib AM. (14/21). 2019. Inactivation of proprotein convertases in T cells inhibits PD-1 expression and creates a favorable immune microenvironment in colorectal cancer. Cancer Res. 79(19):5008-5021. IF: 9.727.

**6** Jardin I, Diez-Bello R, Lopez JJ, Redondo PC, Salido GM, Smani T, **Rosado JA (AC)**. (7/7). 2018. TRPC6 Channels Are Required for Proliferation, Migration and Invasion of Breast



Cancer Cell Lines by Modulation of Orai1 and Orai3 Surface Exposure. *Cancers*. 10(9) pii: E331. [IF: 6.162](#).

7 Lopez JJ, Albarrán L, Jardín I, Sanchez-Collado J, Redondo PC, Bermejo N, Bobe R, Smani T, **Rosado JA (AC)**. (9/9). 2018. Filamin A Modulates Store-Operated  $Ca^{2+}$  Entry by Regulating STIM1 (Stromal Interaction Molecule 1)-Orai1 Association in Human Platelets. *Arterioscler Thromb Vasc Biol*. 38(2):386-397. [IF: 6.618](#).

8 Albarran L, Lopez JJ, Jardin I, Sanchez-Collado J, Berna-Erro A, Smani T, Camello PJ, Salido GM, **Rosado JA (AC)**. (9/9). 2018. EFHB is a Novel Cytosolic  $Ca^{2+}$  Sensor That Modulates STIM1-SARAF Interaction. *Cell Physiol Biochem*. 51(3):1164-1178. [IF: 5.500](#).

9 Berna A, Jardin I, Salido GM, **Rosado JA (AC)**. (4/4). 2017. Role of STIM2 in cell function and physiopathology. *J Physiol*. 595(10):3111-3128. [IF: 4.540](#).

10 Adam F, Khatib AM, Lopez JJ, Vazier C, Turpin S, Muscat A, Soulet F, Aries A, Jardin I, Bobe R, Stepanian A, De Prost D, Dray C, **Rosado JA**, Valet P, Feve B, Siegfried G (14/17). 2016. Apelin acts as an antithrombotic factor by inhibiting platelet functions. *Blood*. 127(7): 908-920. [IF: 13.164](#).

### C.2. Congress (most relevant invited conferences in the last 10 years)

1 *Functional differences between Orai1 $\alpha$  and Orai1 $\beta$* . ICCM2022. **Lille, France** 06/12/2022.

2 *The SOC channel complex*. SECF. **Badajoz, Spain**. 20/09/2022.

3 *The Orai1-AC8 interaction in tumor and non-tumor cells*. European Calcium Society. **UK**. 25/03/2021.

4 *Regulation of Orai1 by AC8 in tumoral and non-tumoral cells*. Cinvestav. **México, México**. 9/11/2020.

5 *Role of TRPC6 in breast cancer cell  $Ca^{2+}$  homeostasis*. Red Española de Canales Iónicos . **Cáceres, Spain**. 16/05/2019.

6 *Role of TRPC6 in store-operated  $Ca^{2+}$  entry in breast cancer cells*. COST BM1406 action . **Graz, Austria**. 15/02/2019.

7 *Fine-tuning of store-operated  $Ca^{2+}$  entry by SARAF and EFHB*. 6<sup>TH</sup> International Iberian Biophysics Congress. **Castellón, Spain**. 21/06/2018.

8 *STIM1 and calcium channel complexes in cancer*. European Calcium Society Workshop 2015. **Seillac, France**. 22/06/2015.

9 *TRP channels and the calcium entry signalplex*. XXXVII Congress of the Spanish Physiological Society. **Granada, Spain**. 25/09/2014.

### C.3. Research projects.

1 Relevancia de los canales Orai en las características y progresión del cáncer de mama (2023-2026). Ref. PID2022-136279NB-C21, 325.000 €, **Spanish Ministry of Science and Innovation**. PI: Juan A. Rosado.

2 Remodeling of the expression of STIM and Orai and regulatory mechanisms in breast cancer (2020-2023). Ref. PID2019-104084GB-C21, 231.110 €, **Spanish Ministry of Science and Innovation**. PI: Juan A. Rosado.

3 Study of the role of the Orai1 variants, Orai1 $\alpha$  and Orai1 $\beta$ , in cell function (2021-2024). Ref. IB20007, 149.990,5 €, **Junta de Extremadura**, PI: Juan A. Rosado.

4 Calcium influx remodeling in breast cancer (2017-2019). Ref. BFU2016-74932-C2-1-P, 268.300 €, **Spanish Ministry of Economy and Competitiveness**. PI: Juan A. Rosado.

5 Study of the relationship between Orai and TRPC channels, their functional characteristics and relevance in the breast cancer pathophysiology (2017-2020). Ref. IB16046, 149.988,30 €, **Junta de Extremadura**. PI: Juan A. Rosado.



**6** Store-operated  $\text{Ca}^{2+}$  entry: regulation by new intracellular proteins and involvement of STIM, Orai and TRP channels in cancer cell proliferation (2014-2016). Ref. BFU2013-45564-C2-1-P, 266.200 €, **Spanish Ministry of Economy and Competitiveness**. PI: Juan A. Rosado.

**7** Regulation of calcium influx by STIM, Orai and TRPC proteins in non-excitabile cells (2011-2013). Ref. BFU2010-21043-C02-01, 219.010 €, **Spanish Ministry of Economy and Competitiveness**. PI: Juan A. Rosado.

**8** Acquisition of a videomicroscopy system for 3D cell culture (2019-2022). Ref. EQC2019-005478-P, 236.973 €, **Spanish Ministry of Science and Innovation**. PI: Juan A. Rosado.

**9** Acquisition of a high resolution advanced microscopy system for organoids, embryos and cell culture (2021-2022). Ref. EQC2021-007642-P, 846.954€, **Spanish Ministry of Science and Innovation**. PI: Juan A. Rosado.

#### **C.4. Contracts, technological or transfer merits.**

**1** Agreement with the company Hnos. Regodón for the study of the effect of melatonin in TRPC6 overexpression in breast cancer cells. Junta de Extremadura. PI: Juan A. Rosado. 23/03/2018-23/09/2019. 27.361,41 €.

**2** Agreement between UEx and Copreca Sociedad Cooperativa to develop the project "Practical application of melatonin in the prevention of ovine infectious diseases" (2008-2010). Ref. PDT08A020, 108.900€, Junta Extremadura. PI: Sergio Regodón.

**3** Contract with the company ALEXIS for the commercialization of CINNAMTANNIN B-1 (2008-cont). PI: Joaquín Altarejos.

**4 Patent:** «Procedure for the elution, separation and identification of proteins and equipment to perform it». Authors: Pedro C. Redondo, Juan A. Rosado, José A. Pariente, Ginés M. Salido. Ref. 2 337 225. Spain. 2011. University of Extremadura.

#### **C.5. Institutional responsibilities**

**1.** Head of the Department of Physiology of the University of Extremadura (since 2016).

**2.** Director of the Secretariat of International Relations of UEx (2011-2015), position assimilated to Faculty Dean. I participated in the UEx strategies of internationalization.

#### **C.6. Other**

**1** Scientific Committee of XL Congress Spanish Soc Physiol Sci (SECF). Badajoz-Spain, 2022.

**2** Organizing Committee VIII meeting Red Española de Canales Iónicos. Alicante, Spain, 2022.

**3** Organizer of VII meeting of Red Española de Canales Iónicos. Cáceres, Spain, 2019.

**4** Organizing Committee of 14<sup>th</sup> Meeting European Calcium Society. Valladolid, Spain, 2016.

**5** Organizing Committee of the Internationalization and Cooperation Commission of Spanish Universities. Cáceres, Spain, 2013.

**6** Scientific Board Member of the Spanish State Research Agency (AEI) since 2019.

**7** Coordinator of the BIO-BIF area AEI since 01/01/2023.

**8** President of the Commission of Health Sciences and Technology of the Agencia Andaluza del Conocimiento (since 2021).

**9 Scientific Reviewer** of National and International institutions: AEI, ANEP, SETH, SEPIE, Wellcome Trust, MRC and British Heart Foundation (UK), FWF (Austria), European Science Foundation, Swiss National Science Foundation, Israel Science Foundation, Human Frontier Science and TELETHON Fondazione ONLUS (Italy).

**10 Editorial board member** of JBC (2010-2015), BBA (2014-cont.), Cell Calcium (2017-cont.), Cancers (2018-cont.), Cells and IJMS (2018-cont.). **Associate Editor** of Frontiers in Pharmacology (2015-cont.). **Chief Editor** of the journal "Fisiología" of the Spanish Society of Physiological Sciences (2009-cont.). **Editor of 4 books** for Springer and CRC-Press, among others, and **Editor of 4 Special Issues** for BBA-MCR, Cancers, CMC and CVP.