

Curriculum vitae

Dr. Tarik Smani Hajami



PERSONAL DATA

Family name: **Smani Hajami**

Date of birth: 28/07/1971

Researcher ID: D-5372-2016

Forename: **Tarik**

Gender: M

Código Orcid: 0000-0002-1877-7438

PRESENT PROFESSIONAL POSITION

Professional Status: Associate Professor of Physiology at the University of Seville.

Center: Faculty of Medicine. Institute of Biomedicine of Sevilla (IBiS).

Department: Medical Physiology and Biophysics, Group of Cardiovascular Pathophysiology.

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ACADEMIC AND PROFESSIONAL HONORS

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|-----------|---|
| 2021 | Group Leader of Cardiovascular Pathophysiology group in IBiS, Seville (Spain). |
| 2016 | Co-Group Leader of Cardiovascular Pathophysiology group in IBiS, Seville (Spain). |
| 2016- | Associate professor; University of Seville (Spain). |
| 2011-2016 | Assistant professor; University of Seville (Spain). |
| 2010-2011 | Research associate; Institute of Biomedicine of Seville (IBiS). |
| 2005-2010 | Awardee as Researcher in "Ramon y Cajal" program (Tenure-Track Spanish Program). |
| 2001-2005 | Research Associate in Vascular Biology Unit, Whitaker Cardiovascular Institute, Boston University School of Medicine, Boston (USA). |
| 2000 | Ph.D from University of Seville. Thesis title: "Homeostasis of calcium in myocytes from pulmonary arterial tree".
Supervisors: Juan Urena López & José López-Barneo. |
| 1995-2000 | PhD Student in Departamento de Fisiología Médica y Biofísica, University of Seville (Spain). |
| 1993 | Degree in Biology, Faculté des Sciences, Université de M ^o Ismail, Meknes (Morocco). |

PERSONAL STATEMENT

PhD in Biology from the University of Seville. Full Professor at the Department of Medical Physiology and Biophysics of the University of Seville (Appointment December 20, 2016). Group Leader of the Cardiovascular Physiopathology group at the Institute of Biomedicine of Seville, Hospital Virgen del Rocío (Appointment in June 2021). My research focusses on the characterization of molecular mechanisms that regulate calcium ion homeostasis, especially in muscle cells. I have special interest in investigating mechanism related to the adverse cardiac and vascular remodeling.

My research career began in 1995 when I joined Dr. José López Barneo's research group as a Doctoral fellow. Under his supervision as well as that of Dr. Juan Ureña López I realized a Doctoral Thesis related to "Calcium homeostasis in myocytes of the pulmonary arterial tree", in Seville on 24/07/2000. After obtaining my PhD degree I joined Dr. Victoria Bolotina's group at the Vascular Biology Unit of the Whitaker Cardiovascular Institute of the University of Boston in the USA, for a post-doctoral stay that lasted 4 years. The results during this period had a high impact in our research field since we determined a new mechanism of regulation of an ion channel, which was published in high impact journals (Nature Cell Biology, JBC, Molecular Pharmacology...). In 2004 I got a "Ramón y Cajal" contract, which allowed me to form a research group with Dr. Antonio Ordoñez, Chief of Cardiac Surgery Service at that time. Since then, I went through different program of research. In 2011, was hired as professor of physiology by University of Seville. Since 2016, I am Associate Professor in the Department of Medical Physiology and Biophysics at the University of Seville.

As a result of my research over the years are more than 70 scientific articles, cited 1820 times according to Scopus, of which 15 are published in first decile journals and others 36 in the first quartile of their area of knowledge, such as Nat Cell Biol, Circ Res, Molecular Therapy NA, Cardiovas Res, ATVB, Scient Rep, JBC, BBA, etc My H-index is 25.

To date, I have supervised 7 doctoral theses and several master's and bachelor's degree final projects. I was PI of 2 "American Heart Association" grants, 5 national grants from Spanish Agency of Investigation; 3 grants from the Andalusian Community. I also collaborated in 6 national and 3 international projects of the National Institute of Health (NIH). I actively participate in the evaluation of national (ANEP) and international (Wellcome Trust of the United Kingdom; British Heart Foundation) projects, as well as articles in different peer-reviewed journals.

GENERAL INDICATORS OF SCIENTIFIC PRODUCTIONS

Sexenios: 3 (Last one in 2016).

Thesis Director: 7. Other 3 ongoing.

Articles: 69 Manuscripts (15 D1; 36 Q1), 5 editorials y 12 Book chapters

Citation: 1826 (Scopus); 2034 (ResearchGate); 2452 (Google Scholar)

H index: 25 (scopus); 27 (ResearchGate); 29 (Google Scholar).

Impact Factor: 361,922 Average of the IF: 5,24

PRESENT RESEARCH LINES

- Store Operated Calcium signaling in cardiovascular remodeling and angiogenesis.
- Mechanism of cardiac adverse remodeling. Inflammation and intracellular Ca²⁺ mishandling.
- Cardiovascular protection from ischemia and reperfusion injuries. Role of urocortin isoforms.
- Vascular wall remodeling. microRNAs and post-transcriptional regulation.

PUBLISHED PEER REVIEW JOURNAL ARTICLES

Key: FI: Impact Factor; D = decil, Q = quartil

1. Del Toro R*, Galeano-Otero I*, Bevilacqua E*, Guerrero-Márquez F, Falcon D, Guisado-Rasco A, Díaz-de la Llera L, Baron-Esquivias G, **Smani T***, Ordoñez-Fernandez A\$. Predicted value of microRNAs, pro-inflammatory cytokines, and intermediate monocytes levels in the adverse left ventricular remodelling in revascularized STEMI patients. *Front. Cardiovasc. Med.* In press. FI: 6,050; Q1. \$ Corresponding authors
2. Mayoral-Gonzalez I, Calderon-Sanchez E., Galeano-Otero I, Gutierrez-Carretero E, Domenech N, Crespo-Leiro MG, Gomez AM, Ordoñez A, Hmadcha A, **Smani T**. Cardiac protection induced by urocortin-2 enables the regulation of apoptosis and fibrosis after ischemia and reperfusion involving miR-29a modulation. *Mol Ther Nucleic Acids.* 27 March 2022. <https://doi.org/10.1016/j.omtn.2022.01.003>. FI: 8,886; D1.
3. Sanchez-Collado J, Lopez JJ, Cantonero C, Jardin I, Regodón S, Redondo PC, Gordillo J, **Smani T**, Salido GM, Rosado JA. Orai2 Modulates Store-Operated Ca²⁺ Entry and Cell Cycle Progression in Breast Cancer Cells. *Cancers* 2022, 14, 114; <https://doi.org/10.3390/cancers14010114>. FI: 6,639; Q1.
4. Sanchez-Collado J, Lopez JJ, Jardin I, Berna-Erro A, Camello PJ, Cantonero C, Smani T, Salido GM, Rosado JA. Orai1 α , but not Orai1 β , co-localizes with TRPC1 and is required for its plasma membrane location and activation. *Cell Mol Life Sci.* Accepted FI: 9,261; D1.
5. Calderon-Sanchez E, Falon-Boyano D, Martin-Bornez M, Ordoñez A, **Smani T**. Urocortin role in ischemia cardioprotection and the adverse cardiac remodelling. *Int. J. Mol. Sci.* 2021, 22(22), 12115; <https://doi.org/10.3390/ijms222212115> - FI: 5,923; Q1.
6. Jardin I, Nieto-Felipe J, Alvarado S, Diez-Bello R, Lopez JJ, Salido GM, **Smani T**, Rosado JA (8/7). SARAF and EFHB Modulate Store-Operated Ca²⁺ Entry and Are Required for Cell Proliferation, Migration and Viability in Breast Cancer Cells. *Cancers* 2021, 13(16), 4160; <https://doi.org/10.3390/cancers13164160>. FI: 6,639; Q1.
7. Val-Blasco A*, Marta Gil-Fernández M*, Rueda A, Pereira L, Delgado C, **Smani T**, Ruiz Hurtado G, Fernández-Velasco M (8/6). Ca²⁺ mishandling in heart failure, potential targets. *Acta Physiol.* 2021:e13691. doi: 10.1111/apha.13691. FI: 6,311; D1.
8. López JJ, Siegfried G, Cantonero C, Soulet F, Descarpentrie J, **Smani T**, Badiola I, Pernot S, Evraud S, Rosado JA, Khatib AM (11/6). Furin prodomain pparin enhances Ca²⁺ entry through orai and trpc6 channels' activation in breast cancer cells. *Cancers*, 2021,13(7),1670. <https://doi.org/10.3390/cancers13071670>. FI: 6,639; Q1.
9. Gutierrez-Carretero E, Mayoral-Gonzalez I, Jesus Moron F, Fernandez-Quero M, Dominguez-Rodriguez A, Ordoñez A, **Smani T** (7/7). miR-30b-5p Downregulation as a Predictive Biomarker of Coronary In-Stent Restenosis. *Biomedicines.* 2021;9(4):354. doi: 10.3390/biomedicines9040354. FI: 6,081; Q1.
10. Galeano-Otero I, Del Toro R, Khatib AM, Rosado JA, Ordoñez A, **Smani T** (6/6). SARAF and Orai1 contribute to endothelial cell activation and angiogenesis. *Front. Cell Dev. Biol.* 2021;9:639952. doi: 10.3389/fcell.2021.639952. FI: 6,684; Q1.
11. Jardin I*, Diez-Bello R*, Falcon D*, Alvarado S, Regodon, Salido G, **Smani T**, Rosado JA (8/7). Melatonin downregulates TRPC6, impairing store-operated calcium entry in triple negative breast cancer cells. *J Biol Chem.* 2021, 296, 100254. doi: 10.1074/jbc.RA120.015769. FI: 5,157; Q2.
12. Martín-Bórnez M, Galeano-Otero I, Del Toro R, **Smani T** (4/4) TRPC and TRPV Channels Role in Vascular Remodeling and Disease. *Int J Mol Sci.* 2020;21(17):E6125. doi: 10.3390/ijms21176125. FI: 5,923; Q1.
13. Jaén RI, Val-Blasco A, Prieto P, Marta Gil-Fernandez, **Smani T**, Lopez-Sendón JL, Delgado C, Bosca L, Fernández-Velasco (9/5). Innate immune receptors, key actors in cardiovascular disease. *JACC Basic To translational Science.* 2020; 5(7).735–49. doi: 10.1016/j.jacmts.2020.03.015. FI: 8,648; Q1.
14. Galeano-Otero I, Del Toro R, Guisado A, Díaz I, Mayoral-González I, Guerrero-Márquez F, Gutiérrez-Carretero E, Casquero-Domínguez S, Díaz-de la Llera L, Barón-Esquivias G, Jiménez-Navarro M, **Smani T***, Ordoñez-Fernández A*. (13/12) Circulating miR-320a as a Predictive Biomarker for Left Ventricular Remodelling in STEMI Patients Undergoing Primary Percutaneous Coronary Intervention. *J Clin Med.* 2020; 9(4).1051. doi: 10.3390/jcm9041051. FI: 4,241; Q1. *corresponding author

15. Falcon D; Galeano-Otero I; Martin-Bornez M; Fernández-Velasco M; Gallardo-Castillo I; Rosado JA; Ordoñez A; **Smani T**. (8/8) Dysregulation and Ca²⁺ Mishandling In Ischemic Heart Disease. *Cells* 2020, 9(1), 173. doi: 10.3390/cells9010173. FI: 6,600; Q2.
16. Calderón-Sánchez E, Ávila-Medina J, Callejo-García P, Fernández-Velasco M, Ordóñez A, **Smani T**. (6/6) Role of Orai1 and L-type CaV1.2 channels in Endothelin-1 mediated coronary contraction under ischemia and reperfusion. *Cell Calcium*. 2020. 86:102157. doi: 10.1016/j.ceca.2019.102157. FI: 6,817; Q1.
17. Cicvaric A, Sachernegg HM, Stojanovic T, Symmank D, **Smani T**, Moeslinger T, Uhrin P, Monje FJ.(8/5) Podoplanin gene disruption in mice promotes in vivo neural progenitor cells proliferation, selectively impairs dentate gyrus synaptic depression and induces anxiety-like behaviors. *Front Cell Neurosci*. 2020;13:561. doi: 10.3389/fncel.2019.00561. FI: 5,505; Q1.
18. Lopez JJ, Jardin I, Sanchez-Collado J, Salido GM, **Smani T**, Rosado JA. (6/5) TRPC Channels in the SOCE Scenario. *Cells* 9 (1), 126. FI: 5,656; Q1.
19. **Smani T**, Gallardo-Castillo I, Avila-Medina J, Jimenez-Navarro MF, Ordoñez A, Hmadcha A. (6/1). 2019. Impact of diabetes on cardiac and vascular disease: Role of calcium signaling. *Curr Med Chem*. 26(22):1-11. IF: 3.89; Q1.
20. Lopez E, Frischauf I, Jardin I, Derler I, Muik M, Cantonero C, Salido GM, **Smani T**, Rosado JA, Redondo PC. (10/7). 2019. STIM1 phosphorylation at Y316 modulates its interaction with SARAF and the activation of SOCE and ICRAC. *J Cell Sci*. 132(10). pii: jcs226019. IF: 4.517. Q1
21. Falcon D, Galeano-Otero I, Calderon-Sanchez E, Del Toro R, Martin-Bornez M, Rosado JA, Abdelkrim Hmadcha A, **Smani T**. TRP channels: Current perspectives in the adverse cardiac remodeling. *Front Physiol* 2019. ;10:159. doi: 10.3389/fphys.2019.00159. FI: 3,394; Q1.
22. **Smani T**, Gómez-Gordo L, Regodón S, Woodard GE, Siegfried G, Khatib AM, Rosado JA. TRP channels in angiogenesis and other endothelial functions. *Front Physiol* 2018; 9:1731. doi: 10.3389/fphys.2018.01731. FI: 3,394; Q1.
23. Albarran A, Lopez JJ, Jardin I, Berna-Erro A, **Smani T**, Camello PJ, Salido GM, Rosado JA. EFHB is a novel cytosolic Ca²⁺ sensor that modulates STIM1-SARAF interaction. *Cell Physiol Biochem* 2018;51(3):1164-1178. FI: 5,5; D1.
24. Jardin I, Díez-Bello R, Lopez JJ, Redondo PC, Salido GM, **Smani T**, Rosado JA. TRPC6 channels are required for proliferation, migration and invasion of breast cancer cell lines by modulation of Orai1 and Orai3 surface expression. *Cancers* 2018;10(9), pii: E331. FI: 5,326; Q1.
25. Domínguez-Rodríguez A, Mayoral-Gonzalez I, Avila-Medina J, de Rojas-de Pedro ES, Calderón-Sánchez E, Díaz I, Hmadcha A, Castellano A, Rosado JA, Benitah J-P, Gomez AM, Ordoñez A and **Smani**. Urocortin-2 Prevents Dysregulation of Ca²⁺ Homeostasis and Improves Early Cardiac Remodeling After Ischemia and Reperfusion. *Front. Physiol*. 2018; 9:813. doi: 10.3389/fphys.2018.00813. FI: 3,394; Q1.
26. López-Beas J, Capilla-González V, Aguilera Y, Mellado N, Lachaud CC, Martín F, **Smani T**, Soria B, Hmadcha A. miR-7 modulates human embryonic stem cell differentiation into insulin-producing beta-like cells and contributes to cell maturation. *Mol Ther Nucleic Acids*. 2018; 12:463-477. <https://doi.org/10.1016/j.omtn.2018.06.002>. FI: 6,39; D1.
27. Avila-Medina J, Mayoral-Gonzalez I, Dominguez-Rodriguez A, Gallardo-Castillo I, Ribas J, Ordoñez A, Rosado JA, **Smani T**. The complex role of store operated calcium entry pathways and related proteins in the function of cardiac, skeletal and vascular smooth muscle cells. *Front Physiol*. 2018; 9:257. FI: 4.13; Q1.
28. López JJ, Albarrán L, Jardín I, Sánchez-Collado J, Redondo PC, Bermejo N, Bobe R, **Smani T**, Rosado JA. Filamin A modulates store-operated Ca²⁺ entry by regulating STIM1-Orai1 association in human platelets. *Arterioscler Thromb Vasc Biol*. 2018 Feb;38(2):386-397. FI: 6.607; 1D.
29. Díaz I, Calderón-Sánchez E, Toro RD, Ávila-Médina J, de Rojas-de Pedro ES, Domínguez-Rodríguez A, Rosado JA, Hmadcha A, Ordóñez A, **Smani T**. miR-125a, miR-139 and miR-324 contribute to

- Urocortin protection against myocardial ischemia-reperfusion injury. *Sci Rep.* 2017;7(1):8898. doi: 10.1038/s41598-017-09198-x. FI: 5,6; Q1.
30. Jardín I, López JJ, Díez R, Sánchez-Collado J, Cantonero C, Albarrán L, Woodard GE, Redondo PC, Salido GM, **Smani T**, Rosado JA. TRPs in Pain Sensation. *Front Physiol.* 2017;8:392. doi: 10.3389/fphys.2017.00392. eCollection FI: 4,13; Q1.
 31. Ávila-Medina J, Calderón-Sánchez E, González-Rodríguez P, Monje-Quiroga F, Rosado JA, Castellano A, Ordóñez A, **Smani T**. Orai1 and TRPC1 colocalize with CaV1.2 channels to form a signal complex in vascular smooth muscle cells. *J Biol Chem.* 2016;291(40):21148-21159. DOI: 10.1074/jbc.M116.742171. FI: 4.258; Q1.
 32. Cicvaric A, Yang J, Krieger S, Khan D, Kim EJ, Dominguez-Rodriguez M, Cabatic M, Molz B, Acevedo Aguilar JP, Milicevic R, **Smani T**, Breuss JM, Kerjaschki D, Pollak DD, Uhrin P, Monje FJ. brain-tumor related protein podoplanin regulates synaptic plasticity and hippocampus-dependent learning and memory. *Ann Med.* 2016:1-17. DOI: 10.1080/07853890.2016.1219455. FI: 3,76; Q1
 33. Albarran L, Lopez JJ, Ben Amor N, Martin-Cano FE, Berna-Erro A, **Smani T**, Gines M. Salido G, Rosado JA. Dynamic interaction of SARAF with STIM1 and Orai1 to modulate store operated calcium entry. *Scientific Rep.* 2016; 6:24452. DOI: 10.1038/srep24452. FI: 5,6; D1.
 34. **Smani T**, Domínguez-Rodríguez A, Callejo-García P, Rosado JA, Avila-Medina J. Phospholipase A2 as a Molecular Determinant of Store-Operated Calcium Entry. *Adv Exp Med Biol.* 2016;898:111-31. doi: 10.1007/978-3-319-26974-0_6. FI: 2, Q2
 35. Lopez JJ, Albarran L, Gómez LJ, **Smani T**, Salido GM, Rosado JA. Molecular modulators of store-operated calcium entry. *Biochim Biophys Acta.* 2016;1863(8):2037-43. doi: 10.1016/j.bbamcr.2016.04.024. FI: 5,126; Q1.
 36. Berna-Erro A, Jardín I, **Smani T**, Rosado JA. Regulation of Platelet Function by Orai, STIM and TRP. *Adv Exp Med Biol.* 2016;898:157-81. DOI: 10.1007/978-3-319-26974-0_8. FI: 2, Q2
 37. Rosado JA, Díez R, **Smani T**, Jardín I. STIM and Orai1 Variants in Store-Operated Calcium Entry. *Front Pharmacol.* 2016;6:325. doi: 10.3389/fphar.2015.00325. FI: 3,8, Q1.
 38. Calderón-Sánchez E, Díaz I, Ordóñez A, **Smani T**. Urocortin-1 mediated cardioprotection involves XIAP and CD40-Ligand recovery: Role of EPAC2 and ERK1/2. *PLoS One.* 2016;11(2):e0147375. doi: 10.1371/journal.pone.0147375. FI: 3,74; Q1.
 39. Calderón-Sánchez E, Domínguez-Rodríguez A, López-Haldón J, Jiménez-Navarro MF, Gómez AM, **Smani T**, Ordóñez A. Cardioprotective effect of ranolazine in the process of ischemia-reperfusion in adult rat cardiomyocytes. *Rev Esp Cardiol (Engl Ed).* 2016;69(1):45-53. doi: 10.1016/j.rec.2015.02.027. FI: 3,342; Q2.
 40. **Smani T**, Shapovalov G, Skryma R, Prevarskaya N, Rosado JA. Functional and physiopathological implications of TRP channels. *Biochim Biophys Acta.* 2015;1853(8):1772-1782. doi: 10.1016/j.bbamcr.2015.04.016. FI: 5,126; Q1.
 41. Pezzolla D, Lachaud CC, Lopez-Beas J, Domínguez-Rodríguez A, **Smani T**, Soria B, Hmadcha A. Resveratrol ameliorates the maturation process of β -cell-like cells obtained from an optimized differentiation protocol of human embryonic stem cells. *Plos One.* 2015;10(3):e0119904. doi: 10.1371/journal.pone.0119904. FI: 4.092; Q1.
 42. Dionisio N, **Smani T**, Woodard GE, Castellano A, Salido GM, Rosado JA. Homer proteins mediate the interaction between STIM1 and Cav1.2 channels. *Biochim Biophys Acta Mol Cell Res.* 2015;1853(5):1145-1153. doi: 10.1016/j.bbamcr.2015.02.014. FI: 5,126 ; Q1.
 43. **Smani T**, Dionisio N, López JJ, Berna-Erro A, Rosado JA. Cytoskeletal and scaffolding proteins as structural and functional determinants of TRP channels. *Biochim Biophys Acta Mol Cell Res.* 2014;1838(2):658-64. doi: 10.1016/j.bbamem.2013.01.009. FI: 3,99; Q1.
 44. Albarrán L, Lopez JJ, Dionisio N, **Smani T**, Salido GM, Rosado JA. Transient receptor potential ankyrin-1 (TRPA1) modulates store-operated Ca(2+) entry by regulation of STIM1-Orai1 association.

- Biochim Biophys Acta-Mol Cell Res. 2013;1833(12):3025-34. doi: 10.1016/j.bbamcr.2013.08.014. FI: 4,899 ; D1
45. Rodríguez-Moyano M, Díaz I, Dionisio N, Zhang X, Avila-Medina J, Calderón-Sánchez E, Trebak M, Rosado JA, Ordóñez A, **Smani T**. Urotensin-II promotes vascular smooth muscle cell proliferation through store-operated calcium entry and EGFR transactivation. *Cardiovasc Res*. 2013;100(2):297-306. doi: 10.1093/cvr/cvt196. FI: 6,064; Q1.
 46. Díaz I, **Smani T**. New insights into the mechanisms underlying the vascular and cardiac effects of urocortin. *Curr Vasc Pharmacol*. 2013;11(4):457-64. FI: 2,896; Q2.
 47. Acosta J; Haldon J; Gutierrez-Carretero E; Díaz I; **Smani T**; Ordonez A. Strain radial y circunferencial como marcadores de fibrosis en un modelo experimental de infarto de miocardio. *Revista Española de Cardiología*. 2013;66(6):508-9. doi: 10.1016/j.rec.2013.01.009. FI: 3,342; Q1.
 48. Lachaud CC, Pezzolla D, Domínguez-Rodríguez A, **Smani T**, Soria B, Hmadcha A. Functional Vascular Smooth Muscle-like Cells Derived from Adult Mouse Uterine Mesothelial Cells. *Plos One*. 2013;8(2):e55181. doi: 10.1371/journal.pone.0055181. FI: 4,092; Q1.
 49. Domínguez-Rodríguez A, Díaz I, Rodríguez-Moyano M, Calderón-Sánchez E, Rosado JA, Ordóñez A, **Smani T**. Urotensin-II signaling mechanism in rat coronary artery: role of STIM1 and Orai1-dependent store operated calcium influx in vasoconstriction. *Arterioscler Thromb Vasc Biol*. 2012;32(5):1325-32. doi: 10.1161/ATVBAHA.111.243014. FI: 7,21; D1.
 50. Ruiz-Hurtado G, Gómez-Hurtado N, Fernández-Velasco M, Calderón E, **Smani T**, Ordoñez A, Cachofeiro V, Boscá L, Díez J, Gómez AM, Delgado C. Cardiotrophin-1 induces sarcoplasmic reticulum Ca(2+) leak and arrhythmogenesis in adult rat ventricular myocytes. *Cardiovasc Res*. 2012;96(1):81-9. doi: 10.1093/cvr/cvs234. FI: 6,064; Q1
 51. Calderón-Sánchez EM, Ruiz-Hurtado G, **Smani T***, Delgado C, Benitah JP, Gómez AM, Ordóñez A. Cardioprotective action of urocortin in postconditioning involves recovery of intracellular calcium handling. *Cell Calcium*. 2011;50(1):84-90. doi: 10.1016/j.ceca.2011.05.010. FI: 3,55; Q2. *Corresponding author.
 52. Galán C, Dionisio N, **Smani T**, Salido GM, Rosado JA. The cytoskeleton plays a modulatory role in the association between STIM1 and the Ca(2+) channel subunits Orai1 and TRPC1. *Biochem Pharmacol*. 2011;82(4):400-10. doi: 10.1016/j.bcp.2011.05.017. FI: 4,89; D1.
 53. Calderón-Sánchez E, Rodríguez-Moyano M, **Smani T**. Immunophilins and cardiovascular complications. *Curr Med Chem*. 2011;18(35):5408-13. FI: 4,88; D1.
 54. Sáez ME, **Smani T**, Ramírez-Lorca R, Díaz I, Serrano-Ríos M, Ruiz A, Ordoñez A. Association analysis of urotensin II gene (UTS2) and flanking regions with biochemical parameters related to insulin resistance. *PLoS One*. 2011;6(4):e19327. doi: 10.1371/journal.pone.0019327. FI: 4,41; Q1.
 55. **Smani T**, Calderón-Sánchez E, Rodríguez-Moyano M, Domínguez-Rodríguez A, Díaz I, Ordóñez A. Urocortin-2 induces vasorelaxation of coronary arteries isolated from patients with heart failure. *Clin Exp Pharmacol Physiol*. 2011;38(1):71-6. doi: 10.1111/j.1440-1681.2010.05466.x. FI: 1,96; Q2.
 56. **Smani T**, Calderón-Sánchez E, Gómez-Hurtado N, Fernández-Velasco M, Cachofeiro V, Lahera V, Ordoñez A, Delgado C. Mechanisms underlying the activation of L-type calcium channels by urocortin in rat ventricular myocytes. *Cardiovasc Res*. 2010;87(3):459-66. doi: 10.1093/cvr/cvq063. FI: 6,05; D1.
 57. Calderón-Sánchez E, Delgado C, Ruiz-Hurtado G, Domínguez-Rodríguez A, Cachofeiro V, Rodríguez-Moyano M, Gomez AM, Ordóñez A, **Smani T**. Urocortin induces positive inotropic effect in rat heart. *Cardiovasc Res*. 2009;83(4):717-25. doi: 10.1093/cvr/cvp161. FI: 5,8; D1.
 58. **Smani T**, Patel T, Bolotina VM. Complex regulation of store-operated Ca²⁺ entry pathway by PKC-epsilon in vascular SMCs. *Am J Physiol Cell Physiol*. 2008;294(6):C1499-508. doi: 10.1152/ajpcell.00365.2007. FI: 4,23; Q1.

59. **Smani T**, Domínguez-Rodríguez A, Hmadcha A, Calderón-Sánchez E, Horrillo-Ledesma A, Ordóñez A. Role of Ca²⁺-independent phospholipase A2 and store-operated pathway in urocortin-induced vasodilatation of rat coronary artery. *Circulation Res.* 2007;101(11):1194-203. doi:10.1161/CIRCRESAHA.107.159053. FI: 9,9; D1.
60. Csutora P, Zarayskiy V, Peter K, Monje F, **Smani T**, Zakharov SI, Litvinov D, Bolotina VM. Activation mechanism for CRAC current and store-operated Ca²⁺ entry: calcium influx factor and iPLA₂β-dependent pathway. *J Biol Chem.* 2006;281(46):34926-35. doi: 10.1074/jbc.M606504200. FI: 5,81; Q1.
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65. Zakharov SI, **Smani T**, Leno E, Macianskiene R, Mubagwa K, Bolotina VM. Monovalent cation (MC) current in cardiac and smooth muscle cells: regulation by intracellular Mg²⁺ and inhibition by polycations. *Br J Pharmacol.* 2003; 138(1):234-44. DOI:10.1038/sj.bjp.0705074. FI: 3,61; Q1.
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68. Lopez-Barneo J, Pardal R, Montoro RJ, **Smani T**, Garcia-Hirschfeld J, Urena J. K⁺ and Ca²⁺ channel activity and cytosolic [Ca²⁺] in oxygen-sensing tissues. *Respir Physiol.* 1999;115(2):215- 27. FI: 2,2; Q2.

Others

1. Gruszczynska-Biegala J*, Martin-Romero FJ*, Smani T*, Secondo A*. Molecular Components of Store-Operated Calcium Entry in Health and Disease. *Front Cell Neurosci.* 2021 Oct 5;15:771138. doi: 10.3389/fncel.2021.771138.
2. Herruzo A, Hinojosa R, Adsuar A, Noval JA, Smani T, Ordoñez A. Clinical Impact of Rotational Thromboelastometry in Cardiac Surgery. *Transfus Clin Biol.* 2021 Apr 8:S1246-7820(21)00041-0. doi: 10.1016/j.tracli.2021.03.003. FI: 1,406.
3. Braidy N, Smani T, Naziroglu M (3/2). Editorial: Involvement of TRP Channels, Oxidative Stress and Apoptosis in Neurodegenerative Diseases. *Front Physiol* 2021. FI: 3,367; Q1.
4. Rosado JA*, Smani T*. (2/2) Recent advances in cardiovascular and circulatory signalling. *Curr Vasc Pharmacol.* 2013 ;11(4):407-8. *editorial de un numero especial de la revista. doi: 10.2174/1570161111311040005. FI: 2,896; Q2.

Book Chapters

1. Autores: Hmadcha A, Soria B, Tejedo JT, Bedoya FJ, Sempere-Ortells JM, Smani T.
Título: Considerations for Clinical Use of Mesenchymal Stromal Cells
Libro: Handbook of Stem Cell Therapy. 2022 In press
Editorial (si libro): Springer Nature.
2. Autores: Hmadcha A, Smani T, Sempere-Ortells JM, Zhao R, Soria B
Título: Mesenchymal Stromal Cells for covid-19 critical care patients: a present hope
Libro: Handbook of Stem Cell Therapy. 2022 In press
Editorial (si libro): Springer Nature.
3. Autores: Smani T, Mayoral-Gonzalez I, Galeano-Otero I, Gallardo-Castillo I, Rosado JA, Ordoñez A, Hmadcha A, Avila-Medina J.
Título: Non-coding RNAs and ischemic cardiovascular diseases
Libro: Non-coding RNAs in Cardiovascular Diseases.
Serie: Adv Exp Med Biol. 2020;1229:259-271. doi: 10.1007/978-981-15-1671-9_15.
Editorial (si libro): Springer Nature.
4. Lopez JJ, Jardín I, Albarran L, Sánchez-Collado J, Cantonero C, Salido GM, Smani T, Rosado JA.
Título: Molecular basis and regulation of store-operated calcium entry.
Libro: Calcium Signaling. 2ª edición. (2020).
Editor: Shahidul Islam.
Editorial: Springer.
5. Autores: Avila-Medina J, Mayoral-Sánchez I, Galeano-Otero I, Redondo PC, Rosado JA, Smani T.
Título: Pathophysiological significance of store-operated calcium entry in cardiovascular and skeletal muscle disorders and angiogenesis.
Libro: Calcium Signaling. 2ª edición. (2020).
Editor: Shahidul Islam.
Editorial: Springer.
6. Autor: Smani T.
Título: Urocortin
Revista: Encyclopedia of Signaling Molecules, 2nd Edition. 2017
Editorial: Springer. ISBN: 978-1-4614-6438-9 (Print) 978-1-4614-6438-9 (Online).
7. Autores: Smani T, Domínguez-Rodríguez A, Callejo-García P, Rosado JA, Avila-Medina J.
Título: Phospholipase A2 as a Molecular Determinant of Store-Operated Calcium Entry.
Revista: Calcium Entry Pathways in Non-excitable Cells. Vol: 898.
Páginas: 111-31; Fecha: 2016
Editorial (si libro): Springer International Publishing. ISBN: 978-3-319-26972-6
FI: 1.9, Q2.
8. Autores: Berna-Erro A, Jardín I, Smani T, Rosado JA.
Título: Regulation of Platelet Function by Orai, STIM and TRP
Revista: Calcium Entry Pathways in Non-excitable Cells. Vol: 898.
Páginas: 157-81; Fecha: 2016
Editorial (si libro): Springer International Publishing. ISBN: 978-3-319-26972-6
FI: 1.9, Q2.
9. Autores: Younes Smani, Tarik Smani.
Título: Adherens Junctions and Endothelial cytoskeleton.
Revista: Endothelial Cytoskeleton; Páginas: 74- 90; Fecha: 2013
Editorial (si libro): CRC Prss; Taylot & Francis Group. ISBN: 978-1-4665-9035-9
10. Autores: Rodríguez-Moyano M, Domínguez-Rodríguez A, Díaz I, Calderon E, Ordóñez A, Smani T.
Título: La entrada de calcio operada por los reservorios en células excitables de músculo liso
revista: Fisiología
Volumen: 12(1); Páginas:12-14; Fecha: 2010
Boletín Informativo de la sociedad española de ciencias fisiológicas
11. Autores: Calderon E, Domínguez-Rodríguez A, Rodríguez-Moyano M, Ordóñez A, Smani T.
Título: Urocortin Induces Heart Protection against Ischemia-Reperfusion Injury
Libro XXVIII European Section Meeting of the International Society for Heart Research
Páginas: 15- 20; Fecha: 2008

- Editorial (si libro): Medimond S.r.l.
12. Autores: Franco-Obregón A, Ureña J, Smani T, Iwabushi S, López-Barneo J.
Título: Calcium channels, cytosolic calcium and the vasomotor response to hypoxia
Libro: "Oxygen regulation of ion channels and gene expression"
Páginas: 255 – 269; Fecha: 1998
Editorial (si libro): NY: Futura Publishing Company, Inc

GRANTS AND RESEARCH PROJECTS

As Principal Investigator

- **2021-2023.** Characterization of the role of nestin+ cells in myocardial infarction. Role in inflammation and fibrosis. FEDER funds; ref. US-1381135
- **2019-2023.** Remodeling of STIM and Orai expression and their mechanism of regulation in angiogenesis. PID2019-104084GB-C22
- **2017-2019.** Remodeling of calcium entry in angiogenesis. Ref. BFU2016-74932-C2-2-P. Spanish Ministry of Economy and Competitiveness
- **2014-2017.** Regulation of calcium entry in excitable cells: Role of STIM, Orai and TRP proteins in cellular proliferation and vascular remodeling. Ref. BFU2013-45564-C2-2-P. Spanish Ministry of Economy and Competitiveness
- **2010-2013.** Regulation of calcium entry by STIM, Orai and TRPC proteins in excitable cells. Ref. BFU2010-21043-CO2-2. Spanish Ministry of Economy and Competitiveness.
- **2010-2013.** Predictive value of urocortin as biomarker of heart failure. Ref. P10-CVI-6095. Andalusia Government.
- **2010-2013.** Regulation of coronary vascular tone by Urotensina-II. Ref. P08-CVI-3913. Andalusia Government.
- **2006-2009.** Role of Store operated calcium channels in the human and rabbit coronary vasoconstriction. Ref. PI050396. Spanish Ministry of Health.
- **2006-2007.** Study of store operated calcium channels in coronary artery. Ref. 0182/2005. Andalusia Government.
- **2004-2005.** Role of PKC in store-operated Ca²⁺ influx in vascular smooth muscle cells. American Heart Association Ref. 04252860T. USA
- **2002-2004.** Regulation of store operated channel by calmodulin in vascular smooth muscle cells. American Heart Association. USA

As collaborator

- **2018-2021.** Early detection of cardiotoxicity by anthracyclines: Imagen and circulating markers for heart damages detection. PI-0193-2018. PI: Eva Calderon Sanchez.
- **2016-2019.** Prospective study of the treatment of restenosis and determination of miRNAs as an early biomarker and predictor of neointimal tissue proliferation following primary angioplasty in acute myocardial infarction. PI-0313-2016. Andalusia Government. PI: Alejandro Dominguez Rodríguez
- **2013-2015.** Implication of Urocortin in Coronary Microvasculature Lesion After Primary Angioplasty and Its Influence on Cardiac Remodeling. PI-0108-2012. Andalusia Government. PI: Eva Calderon Sanchez.
- **2007-2008.** Urocortin: new cardioprotector and vasodilator of the human coronary artery and mammary artery. 0174/2006. Andalusia Government. PI: Antonio Ordóñez Fernández
- **2006-2009.** Prognostic value of endothelial dysfunction, oxidative stress and inflammation on the occurrence of cardiovascular events in high risk population. Ref. PI051274. Spanish Ministry of Health. PI: Antonio Ordóñez Fernández

- **2003-2007.** Store operated Ca²⁺ influx and iPLA₂ in vascular smooth muscle. NIH/NHLBI. USA. PI: Victoria M Bolotina
- **2000-2004.** Ion channels, calcium regulation and nitric oxide in vascular smooth muscle. NIH/NHLBI. USA PI: Victoria M Bolotina

SCIENTIFIC CONFERENCES (Invited, Oral and Symposium)

1. Orai1, Adenil Ciclasa 8, AMPc: El eje del mal en el infarto agudo del miocardio. Ciclo de seminarios del programa doctoral de la Universidad de Extremadura. 25 de noviembre 2021
2. Orai1 and Store Operated Ca²⁺ Signaling in Vascular Remodeling. Curso organizado por la Sociedad Mexicana de Bioquímica y el Centro de Investigación y de Estudios Avanzados. 25 al 29 de octubre del 2021
3. El complejo papel de la entrada de Calcio regulado por los reservorios en la fisiopatología vascular. Ciclo de seminarios del Instituto de Biología y Genética Molecular (IBGM). Valladolid. 21/02/2020.
4. Essential role of Orai1 and SARAF in vascular remodeling. VII Congreso de la Red Española de Canales Iónicos (RECI) 16/05/2019. Cáceres. España
5. Urocortin-2 prevents dysregulation of Ca²⁺ homeostasis and improves the early cardiac remodeling after ischemia and reperfusion. XXXVIII Sociedad Española de Ciencias Fisiológicas. 19/09/2018. Cadiz. Spain
6. Essential role of Ca²⁺ homeostasis dysregulation in the adverse cardiac remodeling due to heart. XXXVIII Sociedad Española de Ciencias Fisiológicas. 14/09/2016. Zaragoza. Spain
7. Emerging Role of TRP And Store Operated Channels In The Cardiovascular System. XXXVII Spanish Physiological Society Congress. 24/09/2014. Granada. Spain
8. Regulation of vascular tone by urotensin-II is mediated by STIM1 and Orai1. First international meeting on "Ion Channel Signaling Mechanisms: From Basic Science to Clinical application". 28/11/2011. Marrakech, Morocco.
9. Essential role of store-operated calcium channels in urotensin-II evoked vascular smooth muscle proliferation. RECI-III; 02/02/2011. Tenerife. Spain
10. Urocortin induced positive inotropic effect in rats hearts: Role of PKC, MAPK and L-type Ca²⁺ channel. XXXV Spanish Physiological Society Congress. 17/02/2009. Valencia. Spain
11. Positive inotropic effect of Urocortin on cardiomyocytes: Role of L-type calcium channels. XXVIII European Section Meeting of the International Society for Heart Research. Athens. Greece. 28/05/2008.
12. Urocortin: A new modulator of heart performances and vascular tone. XXXIV Spanish Physiological Society Congress. 03/07/2007. Valladolid. Spain
13. Urocortin induced vasodilatation of coronary artery: role of SOC entry and iPLA₂. Focused Meeting of The Physiological Society: Ion Channels and the Microcirculation. 04/04/2007. Belfast, Northern Ireland, UK.
14. A novel mechanism for the store operated calcium influx pathway. XXXIII Spanish Physiological Society Congress. 15/01/2005. Sevilla. Spain
15. A novel mechanism for the store operated calcium influx pathway. Experimental Biology Meeting. 17/04/2004. Washington DC, USA.
16. Ca²⁺-independent phospholipase A₂ is a crucial molecular determinant in store-operated Ca²⁺ influx pathway. 47th annual meeting of the Biophysical Society. 01/03/2003. San Antonio, Tx, USA.

DOCTORAL THESES SUPERVISED

1. PhD student: **Isabel Mayoral Gonzalez**
 Title: Remodelado ventricular adverso tras perfusión aguda. Efecto cardioprotector de la urocortina-2.
 Universidad de Sevilla Fecha: July 2nd 2021

2. PhD student: **Javier Ávila Médina**
 Title: Comunicación funcional entre canales de Ca²⁺ tipo I y canales de Ca²⁺ activados por reservorios, y su regulación del tono vascular
 University of Seville Date: July 20th 2017
3. PhD student: **Ignacio Díaz Carrasco**
 Title: Estudio molecular de la cardioprotección inducida por Urocortina frente al síndrome de isquemia y reperfusión
 University of Seville Date: June 14th 2016
4. PhD student: **Maria Rodriguez Moyano**
 Title: Implicación de la entrada de calcio regulada por los reservorios en la vasoconstricción y proliferación celular inducida por Urotensina-II en aorta
 University of Seville Date: June 6th 2012
5. PhD student: **Alejandro Domínguez Rodríguez**
 Title: Regulación del tono vascular coronario mediado por neuropéptidos
 University of Seville Date: April 1st 2011
6. PhD student: **Eva María Calderón Sánchez**
 Title: Potenciación de los mecanismos endógenos de protección miocárdica frente al síndrome de isquemia-reperfusión
 University of Seville Date: October 30th 2009

OTHERS

- 2021: Organizer of the second edition of the IBiS-Winter International Symposium of External Young Investigators (IBiS-WISE 2021).
- 2019: Member of the scientific commission of the VII RECI congress. May 15-17, 2019 Cáceres.
- 2018: Organizer and Chairman of the Symposium "Cardiovascular risk: from basis physiology to clinical research". XXXIX Congress of the Spanish Society of Physiological Sciences. September 18-21, 2018. Cadiz.
- 2016: Organizer and Chairman of the Symposium "New Insights on the role of ion channels in health and disease". XXXIX Congress of the Spanish Society of Physiological Sciences. September 13-16, 2016. Zaragoza.
- 2016: Associate Editor of "Frontiers in Membrane Physiology and Membrane Biophysics"
- 2015: Reviewer-Editor of Frontiers in Pharmacology "Pharmacology of Ion Channels and Channelopathies"
- Reviewer in several journal as: ATVB, American J physiology, American J Pathology, Cells, JBC, Cell Calcium, Frontiers in Physiology, Pflugers Archiv,....

Co-Editor of "Special Issues" and "Research Topic"

- International Journal of molecular Science. Calcium Mishandling, Inflammation, microRNAs and Their Role in the Adverse Cardiovascular Remodelling. 2021.
- Cancers. Título: Calcium Signaling Remodeling and Functional Role in Cancer Cells. 2021
- Frontiers in Cell and Developmental Biology. Título: Molecular Components of Store-Operated Calcium Entry in Health and Disease. 2020-21.
- Frontiers in Cell and Developmental Biology. Título: A Compendium of Recent Research on Stem Cell-Based Therapy for Covid-19. 2020-21.
- Frontiers in Physiology. Título: Involvements of TRP Channels, Oxidative Stress and Apoptosis in Neurodegenerative Diseases. 2019-20
- Current Vascular Pharmacology. Título: Recent advances in cardiovascular and circulatory signalling. 2013.