



CURRICULUM VITAE (CVA)

CV date	07/05/2023
---------	------------

Part A. PERSONAL INFORMATION

First name	María Teresa		
Family name	Pérez García		
Gender (*)	Female	Birth date (dd/mm/yyyy)	27/04/1963
ID number	12365002H		
e-mail	tperez@ibgm.uva.es	URL http://www.vsmcgroup.uva.es/UIC/index.html	
Open Research Contributor ID (ORCID)	0000-0001-8540-8117		

A.1. Current position

Position	Full Professor of Physiology (Catedrático Universidad)		
Initial date	17/04/2017		
Institution	Universidad de Valladolid		
Departament/Center	Departamento de Bioquímica y Biología Molecular y Fisiología		
Country	Spain	Teleph. number	+34 670758824
Key words			

A.2. Previous positions (research activity interruptions, art. 45.2.c))

Period	Position/Institution/Country/Interruption cause
1997-2017	Catedrática EU, Dept of Physiology, U. Valladolid (2 maternal leaves)
1996-1997	Prof Asociado 6+6, Dept of Physiology, U. Valladolid (1 maternal leave)
1995-1996	Postdoctoral rejoin fellow (MEC), Dept of Physiology, U. Valladolid
1992-1995	PhD fellow, Dept of Physiology and Medicine, Johns Hopkins Univ, MD, USA
1987-1991	Predoctoral fellow, Dept of Physiology, U. Valladolid (1 maternal leave)

A.3. Education

PhD, Licensed, Graduate	University/Country	Year
Licenciada en Medicina (MD)	Universidad de Valladolid	1987
Doctora en Medicina (PhD)	Universidad de Valladolid	1991

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

My research activity has been focused in the field of the **physiology and the molecular biology of ion channels**. After obtaining my PhD degree in the group of chemoreceptors of Dr Constanco González (U. de Valladolid) with a FISs fellowship, I did a postdoctoral stay for 3 years (supported by Fundación Ramón Areces the first 2 years) at the laboratory of Dr E. Marbán (Department of Medicine, Johns Hopkins University) dedicated to the study of structure-function relationships of ion channels and the characterization of the molecular determinants of their conductance and selective permeability.

Upon return to Valladolid in 1995, I have been carrying out an autonomous line of research initially focused on the study of the molecular identity of the oxygen-sensitive K⁺ channels of the carotid body that led to the success in obtaining an independent MCYT project in 2001, and to the establishment of a large number of techniques optimized for the study of ion channels: electrophysiology, microfluorometry, real-time and single-cell qPCR, Western-blot, immunoprecipitation, immunocytochemistry and immunohistochemistry, gene expression manipulation with dominant-negatives, siRNAs and viral vector...

In 2003 we obtained a project within the frame of cooperative networks of the ISCIII (HERACLES network) for the study of the expression and modulation of Kv channels in

vascular smooth muscle (VSMC) in hypertension. This project, which was the beginning of the group on “Ionic channels and vascular pathophysiology”, headed by Dr José Ramón López-López and myself, represented a landmark in our research, leading to a “technology transfer” to a new preparation. The network has also facilitated our group incorporation in the new research area (molecular determinants of essential hypertension and vascular pathologies). Some relevant milestones achieved include:

- Establishment of preparations/models for functional and expression studies in VSMCs
- The attainment of a patent on the use of Kv1.3 blockers against restenosis
- The set up of pressure and wire myography system for small vessels (100-300 μm diameter).
- The building up of a collection of DNA, RNA, proteins and cell lines from human arteries
- The establishment and characterization of animal models of cardiovascular disease

The quality of my research and project management skills are proven by my capacity to establish and maintain an active, multidisciplinary network of collaborators (with clinicians, epidemiologists, chemists and with SMEs) as well as with internationally recognized groups in the field which have contributed to increase the impact and the visibility of our research. I am member of the International Society of Arterial Chemoreceptors (since 1989), Sociedad Española de NeuroCiencias (since 1994, serving as Secretary for 4 years), Biophysical Society (since 1993), American Heart Association (since 2001), The Society of General Physiologists (since 2005), The Physiological Society (since 2007) and the American Physiological Society (since 2009). According to Scopus, I have over 65 published peer-reviewed articles, with 2824 citations and h-index 31; 55 of these publications (87%) are Q1 and 50% are on the first decil. I have been invited as a speaker at Symposiums and research institutions (both in Spain, Europe and USA), and as organizer of several international Meetings. I have 5 “sexenios de investigación”, last obtained in 2018.

As a university professor I have dedicated most of my time and effort to the education of future researchers. I have supervised 8 Grade Students (TFG), 9 Master Students (TFM) and 13 PhD Students (12 at UVa and 1 Joint PhD with KLU, Belgium). All 9 PhD Thesis already defended were International PhD, and 4 Excellence Award. I have been examiner of more than 26 PhD dissertations, 3 of them international, (at St George’s University of London as co-examiner, at Lund University as opponent and at Universidad Nacional de la Plata as jury member).

Part C. RELEVANT MERITS (sorted by typology)

C.1. Publications (10 out of 26 in the last 10 years; * = corresponding author)

1. Serna J., Peraza, D.A., Moreno-Estar, S., Saez, J.J., Gobelli, D., Simarro M, Hivroz, C., López-López JR, Ciudad, P., de la Fuente MA, **Pérez-García MT***. (2023). *Characterization of endogenous Kv1.3 channel isoforms in T cells.* **J Cell Physiol** Online ahead of print.
2. Arévalo-Martínez M., Ciudad, P., Moreno-Estar, S., Fernández, M., Albinsson, S., Cózar-Castellano, I., López-López, J.R., & **Pérez-García, M.T.***. (2021). *miR-126 contributes to epigenetic signature of diabetic vascular smooth muscle and enhances anti-restenosis effects of Kv1.3 blockers.* **Mol Metab** 53:101306 .
3. Ciudad P, Alonso E, Arévalo-Martínez M, Calvo E, de la Fuente MA, **Pérez-García MT***, López-López JR (2021). *Voltage-dependent conformational changes of Kv1.3 channels activate cell proliferation.* **J Cell Physiol** 236(6):4330-4347
4. Moreno-Estar S, Serrano S, Arévalo-Martínez M, Ciudad P, López-López JR, Santos M, **Pérez-García MT***, Arias FJ. (2020). *Elastin-like recombinamer-based devices releasing Kv1.3 blockers for the prevention of intimal hyperplasia: An in vitro and in vivo study.* **Acta Biomaterialia**;115:264-274.
5. Arévalo-Martínez M, Ciudad P, García-Mateo N, Moreno-Estar S, Serna J, Fernández M, Swärd K, Simarro M, de la Fuente MA, López-López JR, **Pérez-García MT***. (2019)

- Myocardin-Dependent Kv1.5 Channel Expression Prevents Phenotypic Modulation of Human Vessels in Organ Culture*. **Arterioscler, Thromb Vasc Biol** 39(12):e273-e286.
6. Alonso-Carbajo, L., Alpizar, Y.A., Startek, J.B., López-López JR, **Pérez-García MT.**, Talavera, K. (2019). *Activation of the cation channel TRPM3 in perivascular nerves induces vasodilation of resistance arteries*. **J Mol Cell Cardiol** 129: 219-230.
 7. Lordén, G., Sanjuán-García, I., de Pablo, N., Meana, C., Alvarez-Miguel, I., **Pérez-García, M.T.**, Pelegrín, P., Balsinde, J., Balboa, M.A. (2017). *Lipin-2 regulates NLRP3 inflammasome by affecting P2X7 receptor activation* **J Expl Med**, 214 (2): 511-528.
 8. Jiménez-Pérez, L., Ciudad, P., Álvarez-Miguel, I., Santos, A., Torres-Merino, R., Alonso, E., De La Fuente, M.A., López-López, J.R., **Pérez-García MT*** (2016). *Molecular determinants of Kv1.3 potassium channels-induced proliferation* **J Biol Chem**, 291 (7), 3569-3580.
 9. Meseguer, V., Alpizar, Y.A., Luis, E., Tajada, S., Denlinger, B., Fajardo, O., Manenschijn, J.-A., Fernández-Peña, C., Talavera, A., Kichko, T., Navia, B., Sánchez, A., Señarís, R., Reeh, P., **Pérez-García, M.T.**, López-López, J.R., Voets, T., Belmonte, C., Talavera, K., Viana, F. (2014). *TRPA1 channels mediate acute neurogenic inflammation and pain produced by bacterial endotoxins*- **Nat Commun**, 5, 3125.
 10. Ciudad P., Jiménez-Pérez, L., García-Arribas, D., Miguel-Velado, E., Tajada, S., Ruiz-Mcdavitt, C., López-López, J.R., **Pérez-García, M.T***. (2012). *Kv1.3 channels can modulate cell proliferation during phenotypic switch by an ion-flux independent mechanism*. **Arterioscler, Thromb Vasc Biol** , 32(5), 299-1307.

C.2. Congress (invited speaker at international conferences)

- 2023. 6th Sophion Ion Channel Modulation Symposium**, Cambridge UK, 20-22/6
- 2022. 75th Meeting of the Society of General Physiologists**, Woods Hole, MA, 7-11/9
- 2018.. XXXIX Meeting of the Spanish Physiological Society–SECF**, Cádiz, 18-21/9
- 2018. Meeting of Danish Cardiovascular Academy**. Sandbjerg Estate (Denmark), 13-15/06
- 2017. 28th Ion Channel Meeting** Sete (France) 10-13/9
- 2017. VI RECI (Spanish Ion Channels meeting)** Santiago de Compostela (Spain) 6-8/9.
- 2016. FASEB SRC on Smooth Muscle**. Lisbon (Portugal) 17-22/9.
- 2014. 11th International Symposium on Resistance Arteries (ISRA)**. Banff, Canada. 7-11/9
- 2013 Vascular signaling Symposium** SmArt Marie Curie network. Lund, Sweeden 11-13/6
- 2011. Annual Meeting of the Physiological Society**. Physiology 2011. Oxford. 11-15 July
- 2011 Themed Meeting of PhySoc**, Vascular & Smooth Muscle Physiology Edinburgh, 6-8/12

C.3. Research projects (last ten years)

- 10/2021-09/2024**.MINECO (PID2020-118517RB-I00) Ion channels in vascular pathophysiology: A history of two channels PI.JR López-López/ MT Pérez García. 181.500 €
- 11/2020-10/2023**.Junta de Castilla y León (VA172P20) Los canales Kv1.3 como nuevas dianas para la prevención de complicaciones macrovasculares en diabetes: Un abordaje multidisciplinar. PI. MT Pérez García. 172.000 €
- 07/2017-12/2019**.Junta de Castilla y León (VA114P17) Nuevas terapias farmacológicas y génicas para la prevención y el tratamiento de las enfermedades vasculares oclusivas. PI. MT Pérez García. 120.000 €
- 12/2016-12/2020**.MINECO (BFU2016-75360-R) Smooth muscle ion channels as markers, targetts and effectors for remodeling. PI. MT Pérez García/JR López-López. 278.300 €
- 01/2015-12/2017**.Research Fund – Flanders FWO- G0C6815N. TRP cation channels in the arterial function. PI Karel Talavera Pérez. 444.000 €.
- 01/2014-12/2016**.MINECO (BFU2013-45867-R) Smooth muslce ion channels as therapeutical targets for vascular remodeling. PI. JR López-López-MT Pérez García. 246.000 €
- 02/2013-02/2017**. Project of ISCIII (RD12/0042/0006) Cardiovascular Research Network- RIC- Program 7. PI. Magda Hears Fortuny (IDIBAPS). 102.350 €/year

01/2011-12/2013. MICINN (BFU2010-15898) Role of smooth muscle ion channels in vascular remodeling. PI M Teresa Pérez García. 277.090 €

01/2011-12/2013 Junta de Castilla y León (VA094A11-2). Asociación de la expresión del canal Kv1.3 con la proliferación en arterias humanas. PI J.R. López López. 30.000,00 €.

C.4. Contracts, technological or transfer merits

Title: Kv1.3 channel blocking substances for the treatment of diseases associated with intimal hyperplasia. PCT/EP09/63099 **Inventors:** M.Heras Fortuny / M.Roque Moreno / M T Perez Garcia / JR Lopez Lopez / P Ciudad Velasco (U. de Valladolid and Hospital Clinic Barcelona) **USPTO 08105518.8, granted 10.11.2011**

C.5. Other relevant merits

FELLOWSHIPS AND AWARDS

2023 Sabbatical fellowship of the Spanish Government (9 months). CRC Diabetes Center University of Lund (Sweden) Lab. Dr. M.F. Gómez.

2012 Sabbatical fellowship of the Spanish Government (4 months) Smooth Muscle Research Group, Dept of Physiology, Univ of Calgary (CA). Lab. Dr W.C. Cole

TEACHING ACTIVITIES

1996 – pres Coordinator, Optometrists (Cell physiology, Neurophysiology), **12 ECTS/yr.**

1996 – pres Lecturer, Medicine: (Cell/Cardiovascular Physiology) **8 ECTS/yr.**

2009 – pres Lecturer, Master (Physiology, Molecular Biology, Patch.clamp) **(8 ECTS/yr.**

2019- pres Coordinator, Biomedical Engineering (Cell/Vascular Physiology) **3 ECTS/yr**

INSTITUTIONAL RESPONSIBILITIES

2022-pres. Secretary of the Doctorate School, U of Valladolid

2014 – 2019. Member of the Doctorate Committee, U de Valladolid/ Spain

2012 – 2019. Member of the Executive Board of Doctorate School, U de Valladolid

2009 – 2019. Coordinator, Doctorate in Biomedical Research, UVa (**Excellence Award**)

2009 – 2019. Coordinator, Master in Biomedical Research, U.de Valladolid, Spain

COMMISSIONS OF TRUST

2021-pres: President, Evaluation Comitee of FPT-Excellence projects, J. de Andalucía

2015 – 2019 Commission II- Cardiovascular section. IUPS

2000 – pres. Scientific Evaluation of projects from international organisms: Wellcome Trust, BHF, MRC (UK) FWO (Belgium) FCT/MCT (Portugal), NSERC/CRSNG (Canada), CONICET (Argentina) EU (7FP), national (MICIN, ANECA, FIS,) and regional agencies.

CONFERENCES GIVEN (Last 10 years)

15/03/2019: Bloqueantes del canal Kv1.3 como terapia anti-restenosis, IMIM, Barcelona

08/03/2018: The other lives of ion channels: Kv1.3 channels and proliferation, IBIS, Sevilla

26/02/2018 Ion channels remodeling in essential hypertension, WUST, St Louis, MO

16/05/2017. Potassium channels in vascular remodeling. UPV-EHU, Bilbao, Spain

12/09/2014. Kv channels in vascular remodeling. Libing Cardiovascular Institute, Calgary,

10/05/2013. Electrical remodeling of vascular smooth muscle in hypertension. ULL, Tenerife

30/08/2012 Vascular Kv1.3 channels. Cedars Sinai Medical Center, LA, California USA.

ORGANISATION OF SCIENTIFIC MEETINGS

2022. 13th Meeting, Society for Resistance Arteries (ISRA), USA. Scientific Comitee

2019. 6th Spanish Reunion of Ion Channels (**RECI-VI**). Cáceres, Spain. Scientific Comitee

2018. 11th Word Congress of Microcirculation (WCM), Vacouver Canada. Scientific Comitee

2017. 12th Meeting, Soc. for Resistance Arteries (ISRA), Manchester UK. Scientific Comitee

2016. FASEB SRC on Smooth Muscle, Lisbon, Portugal. Organizing comitee