

Date of the CVA	24/05/2020
-----------------	------------

Section A. PERSONAL DATA

Name and Surname	José Ramón López López		
DNI	09277604W	Age	56
Researcher's identification number	Researcher ID	A-5541-2009	
	Scopus Author ID	7005955560	
	ORCID	0000-0002-3870-421X	

A.1. Current professional situation

Institution	Universidad de Valladolid		
Dpt. / Centre	Bioquímica, Biología Molecular y Fisiología / Facultad de Medicina		
Address	IBGM, C\ Sanz y Fores esq. Real de Burgos, 47003, Valladolid		
Phone	(+34) 610421042	Email	jrlopez@ibgm.uva.es
Professional category	Catedrático de Universidad del área de Bioquímica y Biología Molecular	Start date	2017
UNESCO spec. code	240000 - Life Science		
Keywords	Electrophysiology; Cell physiology; Laboratory animals; Bioinstrumentation; Cell culture; Tissue culture		

A.2. Academic education (Degrees, institutions, dates)

Bachelor/Master/PhD	University	Year
Bioquímica, Biología Molecular y Fisiología	Universidad de Valladolid	1991
Licenciado en Medicina y Cirugía	Universidad de Valladolid	1987

A.3. General quality indicators of scientific production

- 5 "Sexenios de Investigación", last one corresponding to the period 2011-2017.
- 6 PhD Thesis directed in the last 10 years, 3 of them with "Premio extraordinario"
- 79 peer review publications since 1987. 68 Articles With Citation Data (www.researchid.com)
- Sum of the Times Cited: 2999
- Average Citations per Article: 40.03
- 82,35% of my total publications in Q1 (85% of those published in the last 10 years).
- 2565 cites (2402 without self-citations), 42.75 average citations per paper.
- H-index 28
- <http://scholar.google.com/citations?user=SCTYQt4AAAAJ>
- <https://publons.com/researcher/1750771/jose-ramon-lopez-lopez/>

Section B. SUMMARY OF THE CURRICULUM

My research activity has been always focused in the study of the role of ion channels on several basic mechanisms relevant for the respiratory and the cardiovascular system. My mentor, Dr. Constancio Gonzalez, drove me into science, and under his direction I obtained my PhD working in the mechanisms of oxygen sensing in the carotid body. The collaboration with Dr. López Barneo at that time allowed me to become an electrophysiologist and gave us the opportunity of discovering an oxygen sensitive potassium current as a key mechanism to explain how the chemoreceptor cells of the carotid body transduced the hypoxic stimulus (Science 241,580-582, 1988). After my postdoctoral training I continued in the field several years, working autonomously in the Dr Gonzalez's group in several aspects related with the physiological role of potassium channels in the chemoreceptor cells.

During my postdoctoral years (at the laboratory of Dr. Wier in the laboratory of physiology of the Maryland University) I had the opportunity of getting a solid training in microfluorometry, confocal imaging and imaging analysis while I was involved in the study of the mechanisms of EC coupling in the heart (Science 268, 1042-1045, 1995) at a very interesting time, when

the concepts of local microdomains were developed and the first local calcium transients were recorded.

In 2003 I had the opportunity of being involved in a new 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 from hypertensive patients. That was the beginning of the group on “Ionic channels and vascular pathophysiology” that has been actively working since then in this field under the direction of Dr. M^a Teresa Pérez García and myself.

With the only exception of my postdoctoral training at Baltimore, all my research activity has been carried out in a research and teaching institution, the University of Valladolid, where both duties have been shared in different proportions along all these years of my career. I’ve been involved in teaching of Biochemistry and Molecular Biology in the School of Medicine since 1989, and in a Master of Basic Research since 2009.

Section C. MOST RELEVANT MERITS (ordered by typology)

C.1. Publications

- 1 Scientific paper.** Arévalo-Martínez; et al. 2019. Myocardin-Dependent Kv1.5 Channel Expression Prevents Phenotypic Modulation of Human Vessels in Organ Culture. *Arterioscler Thromb Vasc Biol.* 39-12, pp.e273-e286.
- 2 Scientific paper.** Lopez-Lopez, Jose R; Ciudad, Pilar; Perez-Garcia, M Teresa. 2018. Kv channels and vascular smooth muscle cell proliferation. *Microcirculation (New York)*. 25-1. ISSN 1549-8719.
- 3 Scientific paper.** Pérez-García, M. Teresa; Ciudad, Pilar; López-López, José R. 2018. The secret life of ion channels: Kv1.3 potassium channels and proliferation. *American Journal of Physiology-Cell Physiology*. 314-1, pp.C27-C42. ISSN 0363-6143.
- 4 Scientific paper.** Alvarez-Miguel, Ines; et al. 2017. Differences in TRPC3 and TRPC6 channels assembly in mesenteric vascular smooth muscle cells in essential hypertension. *Journal of Physiology-London*. 595-5, pp.1497-1513. ISSN 0022-3751;1469-7793.
- 5 Scientific paper.** Jimenez-Perez, Laura; et al. 2016. Molecular Determinants of Kv1.3 Potassium Channels-induced Proliferation. *JOURNAL OF BIOLOGICAL CHEMISTRY. AMER SOC BIOCHEMISTRY MOLECULAR BIOLOGY INC.* 291-7, pp.3569-3580. ISSN 0021-9258, ISSN 1083-351X.
- 6 Scientific paper.** Ciudad, Pilar; et al. 2015. Kv1.3 channels modulate human vascular smooth muscle cells proliferation independently of mTOR signaling pathway. *PFLUGERS ARCHIV-EUROPEAN JOURNAL OF PHYSIOLOGY. SPRINGER.* 467-8, pp.1711-1722. ISSN 0031-6768, ISSN 1432-2013.
- 7 Scientific paper.** Isabel Fernandez-Marino, Ana; et al. 2015. Tungstate-Targeting of BK alpha beta(1) Channels Tunes ERK Phosphorylation and Cell Proliferation in Human Vascular Smooth Muscle. *PLOS ONE. PUBLIC LIBRARY SCIENCE.* 10-2. ISSN 1932-6203.
- 8 Scientific paper.** Ciudad, P.; et al. 2014. K⁺ Channels Expression in Hypertension After Arterial Injury, and Effect of Selective Kv1.3 Blockade with PAP-1 on Intimal Hyperplasia Formation. *CARDIOVASCULAR DRUGS AND THERAPY. SPRINGER.* 28-6, pp.501-511. ISSN 0920-3206, ISSN 1573-7241.
- 9 Scientific paper.** Alvarez-Collazo, Julio; et al. 2014. Cinnamaldehyde inhibits L-type calcium channels in mouse ventricular cardiomyocytes and vascular smooth muscle cells. *PFLUGERS ARCHIV-EUROPEAN JOURNAL OF PHYSIOLOGY. SPRINGER.* 466-11, pp.2089-2099. ISSN 0031-6768, ISSN 1432-2013.
- 10 Scientific paper.** Meseguer, Victor; et al. 2014. TRPA1 channels mediate acute neurogenic inflammation and pain produced by bacterial endotoxins. *NATURE COMMUNICATIONS. NATURE PUBLISHING GROUP.* 5. ISSN 2041-1723.
- 11 Scientific paper.** Tajada, Sendoa; et al. 2013. Down-regulation of Ca_v1.2 channels during hypertension: how fewer Ca_v1.2 channels allow more Ca²⁺ into hypertensive arterial smooth muscle. *JOURNAL OF PHYSIOLOGY-LONDON. WILEY-BLACKWELL.* 591-24, pp.6175-6191. ISSN 0022-3751, ISSN 1469-7793.

- 12 Scientific paper.** Tajada, Sendoa; et al. 2012. High blood pressure associates with the remodelling of inward rectifier K(+) channels in mice mesenteric vascular smooth muscle cells JOURNAL OF PHYSIOLOGY-LONDON. WILEY-BLACKWELL. 590-23, pp.6075-6091. ISSN 0022-3751.
- 13 Scientific paper.** Ciudad, Pilar; et al. 2012. Kv1.3 Channels Can Modulate Cell Proliferation During Phenotypic Switch by an Ion-Flux Independent Mechanism ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY. LIPPINCOTT WILLIAMS & WILKINS. 32-5, pp.1299-1307. ISSN 1079-5642.
- 14 Scientific paper.** Miguel-Velado, Eduardo; et al. 2010. Cell cycle-dependent expression of Kv3.4 channels modulates proliferation of human uterine artery smooth muscle cells CARDIOVASCULAR RESEARCH. 86-3, pp.383-391. ISSN 0008-6363.
- 15 Scientific paper.** Ciudad, Pilar; et al. 2010. Characterization of Ion Channels Involved in the Proliferative Response of Femoral Artery Smooth Muscle Cells ARTERIOSCLEROSIS THROMBOSIS AND VASCULAR BIOLOGY. LIPPINCOTT WILLIAMS & WILKINS. 30-6, pp.1203-U297. ISSN 1079-5642.
- 16 Scientific paper.** Gomez-Nino, Angela; et al. 2009. MaxiK potassium channels in the function of chemoreceptor cells of the rat carotid body AMERICAN JOURNAL OF PHYSIOLOGY-CELL PHYSIOLOGY. AMER PHYSIOLOGICAL SOC. 297-3, pp.C715-C722. ISSN 0363-6143.
- 17 Scientific paper.** Moreno-Dominguez, Alejandro; et al. 2009. De novo expression of Kv6.3 contributes to changes in vascular smooth muscle cell excitability in a hypertensive mice strain JOURNAL OF PHYSIOLOGY-LONDON. WILEY-BLACKWELL PUBLISHING, INC. 587-3, pp.625-640. ISSN 0022-3751.
- 18 Scientific paper.** Colinas, Olaia; et al. 2008. A role for DPPX modulating external TEA sensitivity of Kv4 channels JOURNAL OF GENERAL PHYSIOLOGY. ROCKEFELLER UNIV PRESS. 131-5, pp.455-471. ISSN 0022-1295.
- 19 Scientific paper.** Colinas, Olaia; et al. 2006. Differential modulation of Kv4.2 and Kv4.3 channels by calmodulin-dependent protein kinase II in rat cardiac myocytes AMERICAN JOURNAL OF PHYSIOLOGY-HEART AND CIRCULATORY PHYSIOLOGY. AMER PHYSIOLOGICAL SOC. 291-4, pp.H1978-H1987. ISSN 0363-6135.
- 20 Scientific paper.** Miguel-Velado, E; et al. 2005. Contribution of Kv channels to phenotypic remodeling of human uterine artery smooth muscle cells CIRCULATION RESEARCH. LIPPINCOTT WILLIAMS & WILKINS. 97-12, pp.1280-1287. ISSN 0009-7330.
- 21 Scientific paper.** Kaab, S; et al. 2005. Down regulation of Kv3.4 channels by chronic hypoxia increases acute oxygen sensitivity in rabbit carotid body JOURNAL OF PHYSIOLOGY-LONDON. BLACKWELL PUBLISHING. 566-2, pp.395-408. ISSN 0022-3751.
- 22 Scientific paper.** Sanchez, D; et al. 2002. Molecular identification of Kv alpha subunits that contribute to the oxygen-sensitive K⁺ current of chemoreceptor cells of the rabbit carotid body JOURNAL OF PHYSIOLOGY-LONDON. CAMBRIDGE UNIV PRESS. 542-2, pp.369-382. ISSN 0022-3751.
- 23 Scientific paper.** Riesco-Fagundo, AM; et al. 2001. O₂ modulates large-conductance Ca²⁺-dependent K⁺ channels of rat chemoreceptor cells by a membrane-restricted and CO-sensitive mechanism CIRCULATION RESEARCH. LIPPINCOTT WILLIAMS & WILKINS. 89-5, pp.430-436. ISSN 0009-7330.
- 24 Scientific paper.** Perez-Garcia, MT; et al. 2000. Viral gene transfer of dominant-negative Kv4 construct suppresses an O₂-sensitive K⁺ current in chemoreceptor cells JOURNAL OF NEUROSCIENCE. 20-15, pp.5689-5695. ISSN 0270-6474.
- 25 Scientific paper.** LOPEZLOPEZ, JR; et al. 1995. LOCAL CALCIUM TRANSIENTS TRIGGERED BY SINGLE L-TYPE CALCIUM-CHANNEL CURRENTS IN CARDIAC-CELLS SCIENCE. AMER ASSOC ADVAN SCIENCE. 268-5213, pp.1042-1045. ISSN 0036-8075.
- 26 Scientific paper.** LOPEZBARNEO, J; et al. 1988. CHEMOTRANSDUCTION IN THE CAROTID-BODY - K⁺ CURRENT MODULATED BY PO₂ IN TYPE-I CHEMORECEPTOR CELLS SCIENCE. AMER ASSOC ADVANCEMENT SCIENCE. 241-4865, pp.580-582. ISSN 0036-8075.

C.2. Participation in R&D and Innovation projects

- 1 BFU2016-75360-R, Los canales iónicos del músculo liso como marcadores, dianas y efectores en el remodelado vascular MINECO. María Teresa Pérez García. (Universidad de Valladolid). 30/12/2016-29/12/2020. 278.300 €. Co-ordinator.
- 2 VA114P17, Nuevas Terapias Farmacológicas y Génicas para la Prevención y Tratamiento de las Enfermedades Vasculares Oclusivas la proliferación en tejidos arteriales humanos Junta de Castilla y León. M^a Teresa Pérez García. (Universidad de Valladolid). 01/01/2017-31/12/2019. 120.000 €. Team member.
- 3 BFU2013-45867-R, Los canales iónicos del músculo liso como dianas terapéuticas en el remodelado vascular MINECO. José Ramón López López. (Universidad de Valladolid). 01/01/2014-31/12/2016. 246.840 €. Co-ordinator.
- 4 BFU2010-15898, Papel de los canales iónicos del músculo liso en el remodelado vascular MICINN. María Teresa Pérez García. (Universidad de Valladolid). 01/01/2011-31/12/2013. 277.090 €. Others.
- 5 CIDEM-VALTEC09-1-0042, Uso de los bloqueantes del Kv1.3 para la prevención y tratamiento de la hiperplasia de la íntima Generalitat de Catalunya. CIDEM. Mercé Roqué. (Universidad de Valladolid). 01/01/2009-31/12/2011. 79.945 €. Others.
- 6 BFU2007-61524, Caracterización del remodelado eléctrico de las células del músculo liso vascular en un modelo animal de hipertensión esencial Ministerio de Educación, Política Social y Deporte. José Ramón López López. (Universidad de Valladolid). 01/10/2007-31/03/2011. 312.180 €. Co-ordinator.
- 7 RD06/0009/0013, Determinantes genéticos y ambientales de la disfunción vascular en la hipertensión y en la cardiopatía isquémica SGEFI. RETIC (Red Heracles). José Ramón López López. (Universidad de Valladolid). 01/01/2007-31/12/2010. 254.315 €. Co-ordinator.
- 8 GR242, Hipoxia y reactividad vascular Junta de Castilla y León. Constancio González. (Universidad de Valladolid). 01/01/2008-21/12/2010. 269.998 €. Others.
- 9 SAF2007-30202-E, Organization del XVIIth meeting of the international society for arterial chemoreception Ministerio de Educación. Acción Complementaria. Constancio González. (Universidad de Valladolid). 01/02/2008-31/01/2009. 12.000 €. Others.
- 10 VA011C05, Mecanismos moleculares implicados en la homeostasis del oxígeno: Significado clínico Junta de Castilla y León. Constancio González. (Universidad de Valladolid). 16/06/2005-31/12/2007. 98.500 €. Others.
- 11 PI041044, Canales iónicos y proliferación de la íntima. Caracterización del papel funcional de los canales iónicos en el proceso de modulación fenotípica de las células del músculo liso de la pared arterial SGEFI. José Ramón López López. (Universidad de Valladolid). 28/12/2004-30/12/2007. 130.525 €. Co-ordinator.
- 12 BFU2004-05551, Papel de los canales de potasio dependientes de voltaje en la génesis de la hipertensión esencial Ministerio de Educación y Ciencia. María Teresa Pérez García. (Universidad de Valladolid). 13/12/2004-12/12/2007. 244.300 €. Others.
- 13 PIO50933, Determinantes genéticos y ambientales de la disfunción vascular en la hipertensión y en la cardiopatía isquémica SGEFI. RETIC. José Ramón López López. (Universidad de Valladolid). 23/12/2005-30/12/2006. 36.295 €. Co-ordinator.
- 14 G03/045, Determinantes genéticos y ambientales de la disfunción vascular en la hipertensión y en la cardiopatía isquémica SGEFI. RETIC. José Ramón López López. (Universidad de Valladolid). 12/02/2003-31/07/2006. 309.794,29 €. Co-ordinator.

C.3. Participation in R&D and Innovation contracts

Effects of almitrine on the ionic currents of chemoreceptor cells from carotid bodies of adult rabbits Institut de Recherches Servier. Constancio González. (Universidad de Valladolid). 06/09/1995-06/09/1996. 34.978,78 €.

C.4. Patents

María Teresa Pérez García; José Ramón López López; Pilar Cidat; Magda Heras; Mercé Roqué. PCT/EP2009/063099. K channel blockers against restenosis Spain. 14/04/2011. Universidad de Valladolid y Universidad de Barcelona.