| CV Date | 23/02/2023 |
|---|---|

Part A. PERSONAL INFORMATION

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|---|---|---|---|
| First Name * | Antonio | | |
| Family Name * | Castellano Orozco | | |
| Sex * | | Date of Birth * | |
| ID number Social Security, Passport * | | Phone Number * | |
| URL Web | | | |
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* Mandatory

A.1. Current position

| | | | |
|---|---|---|---|
| Job Title | Catedrático de Universidad | | |
| Starting date | 2017 | | |
| Institution | Universidad de Sevilla | | |
| Department / Centre | Fisiología Médica y Biofísica / Facultad de Medicina | | |
| Country | | Phone Number | |
| Keywords | | | |

A.2. Previous positions

| Period | Job Title / Name of Employer / Country |
|---|---|
| 1997 - 2017 | Profesor Titular de Universidad / Universidad de Sevilla |
| 1995 - 1997 | Profesor Titular de Universidad / Universitat de Barcelona |
| 1995 - 1995 | Profesor Asociado / Universidad de Sevilla |
| 1992 - 1995 | Investigador Postdoctoral / Universidad de Sevilla |
| 1991 - 1992 | Investigador Postdoctoral / Baylor College of Medicine |
| 1989 - 1991 | Becario Postdoctoral / Ministerio de Sanidad y Consumo |
| 1985 - 1989 | Becario Predoctoral / Universidad de Sevilla |

A.3. Education

| Degree/Master/PhD | University / Country | Year |
|---|---|---|
| Programa Oficial de Doctorado en Biología Molecular y Celular | Universidad de Sevilla | 1989 |
| Licenciado en Biología | Universidad de Sevilla | 1984 |

A.4. General quality indicators of scientific production

Quality indicators:

-Number of “six-year research periods”: 5 (last one granted in 2018)
-PhD thesis directed in the last 10 years: 4 (2012, 2016 and 2017 and 2022)
-Total number of citations: 2356 (Google Scholar)
-Average number of citations per year during the last 5 years: 87
-Total number of scientific publications: 42
-Total number of publications in first quartile (Q1) journals: 30 (71%)
-H index: 22
-PI of 5 National Plan Research Projects
-Scientific evaluator for the National Research Agency (AEI)

-Reviewer for scientific journals: Pflugers Archive, British J Pharmacology, J Applied Physiology, PlosOne, Cellular Physiology and Biochemistry, Canadian J Physiology and Pharmacology

-Member of the CIBERCV (Cardiovascular) of the "Instituto de Salud Carlos III" 2017-2021

-Scientific coordinator of the group CTS-591 of the PAIDI (Plan Andaluz de Investigación, Desarrollo e Innovación).

-Prize of the Real Academia de Medicina de Sevilla to Scientific Publication in 2019 to the article Gonzalez-Montelongo et al., Stroke, 49: 1507-1510 (2018)

Part B. CV SUMMARY

Research activity

1985-1989 PhD – FISss fellowship (Univ. Sevilla). Research in Cell biophysics: electrophysiological characterization of neurons and other cell types. Analysis of ionic currents using the patch clamp technique.

1989-1992 Postdoctoral researcher - MEC/Fulbright fellowship (Baylor College of Medicine): Structure-function studies in voltage-dependent Ca2+ channels (VDCC). Cloning and functional studies using recombinant Ca2+ channel subunits. Demonstration of the existence of several genes and splice variants in the alpha1 and beta subunits of the VDCC. Cloning and expression of 3 beta subunits.

1992-1995 Postdoctoral researcher – "Reincorporation" Program Spanish Ministry of Education and Science (MEC); Univ. Sevilla): Structure-function studies on voltage-dependent K+ channels. Cloning, molecular studies and functional expression of a "silent" alpha subunit of a neuronal K+ channel.

1995-1997 Associate Professor at the Univ. Barcelona: Electrophysiological studies of the trabecular meshwork cells. Installation of the first patch-clamp set-up at the School of Medicine.

1997-2017 Associate Professor at the University of Sevilla

-Structure-function studies in voltage-dependent K+ channels.

-Analysis of the sensitivity to hypoglycemia of carotid body glomus cells.

-Analysis of the regulation of ion channels expression in cardiomyocytes: effects of hypoxia on the maxi-K channel beta1 subunit and on the T-type Cav3.2 subunit. Effects of glucocorticoids on the expression of the T-type Cav3.2 subunit.

-Regulation of vascular smooth muscle (VSM) contraction. Join Dr. Ureña´s group to analyze the metabotropic role of the L-type Ca2+ channels in VSM cells.

2017-present Professor at the University of Sevilla:

-Analysis of the interactions between PKCalpha and RhoA/ROCK signaling pathways and their role in arterial vasospasm.

-Neuronal channelopathies: Collaboration with Dr. Martínez (IBiS, Sevilla) and Dr. Pujol (IDIBEL, Barcelona) to perform molecular and functional studies of ion channel mutations responsible for ataxias and neonatal epileptic encephalopathy, respectively.

-Cardiac channelopathies: Collaboration with clinicians to study cardiac ion channel mutations responsible for Brugada and Long QT syndromes. Leading role in the formation of the first group in Andalusia to carry out a comprehensive study of channelopathies.

-Collaboration with clinicians from the ICU of the HUVR to address the study of aSAH.

-Changes in the interaction of peripheral blood mononuclear cells with the endothelium in patients with aneurysmal Subarachnoid hemorrhage (aSAH).

Training capacity

I have always been involved in the training of young researchers, with the direction of several doctoral theses. The level of training of graduates has always allowed them to be hired by other national and international laboratories. All continue their research career.

During my stay at the Univ. Barcelona, I had the responsibility of installing a patch-clamp set-up in a laboratory interested in getting started in electrophysiology. I consider that I left a certain mark in the laboratory and, from there, a new line of research could be opened there.

Funding sources: In the last 10 years, I have received funding in competitive calls, both nationally (MINECO) and regionally (Junta de Andalucía).

Management positions
-Coordinator of the Master in Biomedical Research at the Univ. Sevilla 2006-2014
-Since May 2021: Chairman of the Dept. Fisiología Médica y Biofísica, Univ. Sevilla.

## Part C. RELEVANT ACCOMPLISHMENTS

### C.1. Publications

AC: corresponding author. (nº x / nº y): position / total authors. If applicable, indicate the number of citations

1 Scientific paper. Gonzalo Revilla González; Lourdes María Varela; Zaida Ruiz de Azua López; et al;. 2023. Changes in adhesion and the expression of adhesion molecules in PBMCs after Aneurysmal Subarachnoid Hemorrhage: relation to cerebral vasospasm Translational Stroke Research. Springer Nature.

2 Scientific paper. Eduardo Arana-Rueda; Maria Rosa Pezzotti; Alonso Pedrote; Laura Marcos-Fuentes; Manuel Frutos-López; (AC). (6/6). 2021. New variant KCNQ1 c.604+1G>C associated with Jervell-Lange Nielsen Syndrome in homozygosity and compound heterozygosity Revista Española de Cardiología. Elsevier. SCIE (1) https://doi.org/10.1016/j.recesp.2021.11.028

3 Scientific paper. Eduardo Arana Rueda; Maria Rosa Pezzotti; Alonso Pedrote; Juan Acosta; Manuel Frutos López; Lourdes María Varela Pérez; Noelia García Fernández; (AC). (8/8). 2021. Brugada syndrome masked by complete left bundle branch block. A clinical and functional study of its association with the p.1449Y>H SCN5A variant Journal of Cardiovascular Electrophysiology. Wiley. 32-10, pp.2785-2790. SCOPUS (1) https://doi.org/10.1111/jce.15215

4 Scientific paper. Verdura, E; Fons, C; Schlüter, A; Ruiz, M; Fourcade, S; Casasnovas, C; Castellano, A; Pujol, A. (7/8). 2020. Complete loss of KCNA1 activity causes neonatal epileptic encephalopathy and dyskinesia Journal of Medical Genetics. BMJ Journals. 57-2, pp.132-137. SCOPUS (17) https://doi.org/10.1136/jmedgenet-2019-106373

5 Scientific paper. María del Carmen Gonzalez Montelongo; Cristina Porras Gonzalez; Rafaela Gonzalez Montelongo; Gonzalo Revilla Gonzalez; María Dolores Pastor; (AC); Juan Ureña López. (6/7). 2019. PKC?-mediated downregulation of RhoA activity in depolarized vascular smooth muscle: synergistic vasorelaxant effect of PKC? and ROCK inhibition Cellular Physiology and Biochemistry. Karger. 52, pp.76-93. https://doi.org/10.33594/000000006

6 Scientific paper. Porras-González, C; Castellano a (AC); Ureña J. (2/3). 2018. Contribution of L-type Ca2+ channel-sarcoplasmic reticulum coupling to depolarization-induced arterial contraction in spontaneously hypertensive rats Hypertension Research. Springer Nature. 41-9, pp.730-737. SCOPUS (2) https://doi.org/10.1038/s41440-018-0076-7

7 Scientific paper. Domínguez-Rodríguez, A; Mayoral González, I; Avila-Medina, J; et al; Castellano, A; Ordóñez, A. (8/13). 2018. Urocortin-2 prevents dysregulation of Ca2+ homeostasis and improves early cardiac remodeling after ischemia and reperfusion Frontiers in Physiology. 9, pp.813. SCOPUS (12) https://doi.org/10.3389/fphys.2018.00813

8 Scientific paper. Gonzalez-Montelongo MDC; Egea-Guerrero, J.J; Murillo-Cabezas, F; et al; Castellano, A; Ureña, J. (8/9). 2018. Relation of RhoA in peripheral blood mononuclear cells with severity of aneurysmal subarachnoid hemorrhage and vasospasm Stroke. Lippincott Williams & Wilkins. 49-6, pp.1507-1510. SCOPUS (3) https://doi.org/10.1161/STROKEAHA.117.020311

9 Scientific paper. Débora Falcón Boyano; Rafaela González Montelongo; Eva Sánxchez de Rojas de Pedro; Antonio Ordóñez Fernández; Juan Ureña López; (AC). (6/6). 2018. Dexamethasone-induced upregulation of CaV3.2 T-type Ca2+ channels in rat cardiac myocytes The Journal of Steroid Biochemistry and Molecular Biology. Elsevier. 178, pp.193-202. https://doi.org/10.1016/j.jsbmb.2017.12.013

10 Scientific paper. Porras-González, C; Rodóñez, A; Castellano, A (AC); Ureña, J. (3/4). 2017. Regulation of RhoA/ROCK and sustained arterial contraction by low cytosolic Ca2+ levels during prolonged depolarization of arterial smooth muscle Vascular Pharmacology. Elsevier. SCOPUS (2) https://doi.org/10.1016/j.vph.2017.05.002

11 Scientific paper. Tristán-Clavijo, E; Scholl, FG; Macaya, A; Iglesias, G; Rojas, AM; Lucas, M; Castellano, A; Martínez-Mir, A. (7/8). 2016. Dominant-negative mutation p.Arg324Thr in KCNA1 impairs Kv1.1 channel function in episodic ataxia Movement Disorders. 31-11, pp.1743-1748.

12 Scientific paper. Ávila-Medina, J; Calderón-Sánchez, E; González-Rodríguez, P; Monje-Quiroga, F; Rosado, JA; Castellano, A; Ordóñez, A; Smani, T. 2016. Orai1 and TRPC1 colocalize with CaV1.2 channels to form a signal complex in vascular smooth muscle cells.The Journal of Biological Chemistry. 291, pp.21148-21159.

13 Scientific paper. Gonzalez-Rodriguez, P; Falcón, D; Castro, MJ; Ureña, J; López-Barneo, J; Castellano, A. 2015. Hypoxic induction of T-type Ca2+ channels in rat cardiac myocytes: Role of HIF-1? and RhoA/ROCK signaling The Journal of Physiology. 593, pp.64-72.

C.3. Research projects and contracts

1 Project. AKAP9 como modificador genético en el Síndrome de QT largo Tipo 1. Junta de Andalucía. (Universidad de Sevilla). 02/12/2022-01/12/2025. 180.044 €.

2 Project. Regulación metabotrópica de RhoA por los canales de Ca2+: papel en la adhesión de leucocitos al endotelio y la vasorreactividad vascular en la hemorragia subaracnoidea aneurismática en humanos. (Universidad de Sevilla). 01/01/2021-31/12/2022. 70.000 €.

3 Project. Regulación de RhoA/Rho quinasa por los canales de Ca2+ tipo L y PKC?: papel en la microcirculación en la hemorragia subaracnoidea espontánea. Ministerio de Ciencia e Innovación y Universidades. Antonio Castellano Orozco. (Universidad de Sevilla). 01/01/2018-31/12/2020. 145.200 €.

4 Project. Estudio Sobre Los Moduladores Genéticos del Fenotipo en el Sindrome de Qt Largo Tipo 1. Eduardo Arana Rueda. (INSTITUTO DE BIOMEDICINA DE SEVILLA). 01/01/2018-31/12/2019. 48,41 €.

5 Project. Regulacion metabotropica de rhoa/rho quinasa por los canales de Ca2+ tipo L: papel en la fisiopatología arterial. MINECO. (Universidad de Sevilla). 01/01/2014-31/12/2016. 110.000 €.

6 Project. Canales de calcio tipo T en cardiomiocitos: regulacion por la hipoxia y por la ruta Rho-ROCK. Consejería de Economía, Innocación y Ciencia. (Universidad de Sevilla). 01/01/2013-31/12/2016. 195.893 €.

7 Contract. ESTUDIO DE MUTACIONES EN AKAP9 Y KCNH2 COMO MODIFICADORES GENETICOS DEL SINDROME DE QT LARGO TIPO 1 Sociedad Española de Cardiología. Eduardo arana Rueda. 01/05/2017-31/10/2018. 18 €.

8 Contract. Investigación dentro de las líneas de Investigación del Laboratorio de Investigaciones Biomédicas 01/01/2002-01/01/2012.

C.5. Stays in public or private R&D centres

1 Universidad de Sevilla. . 01/10/1992-07/07/1995. 3 years. Contracted.

2 Baylor College of Medicine. United States of America. Houston. 01/01/1989-31/08/1992. 3 years. Post-doctoral.

3 Universidad de Sevilla. . 01/01/1985-31/10/1989. 4 years. Doctorate.