Curriculum Vitae

Salvador Herrera-Pérez, PhD
Postdoctoral Researcher
Experimental Neurophysiology and Neuronal Circuits Group
(Lab i1-05; office i1-08)
Hospital Nacional de Parapléjicos, Toledo, Spain
ORCID: 0000-0002-0491-3718
Researcher ID: 57202604407

ACADEMIC DEGREES:

Ph.D. in Neuroscience, University of Vigo (Spain). 2020
Master in Neuroscience, University of Vigo (Spain). 2017
Degree in in Psychology, U.N.E.D. (Spain). 2015

RESEARCH AND PROFESSIONAL EXPERIENCE.

- Current Position: Postdoc Researcher, Experimental Neurophysiology and Neuronal Circuits Lab, Hospital Nacional de Parapléjicos, SESCAM, Toledo, Spain.

- 2021 - 2022: *Research Fellow, Gobierno Castilla-La Mancha, Convocatoria de Ayudas Regionales a la Investigación en Biomedicina y Ciencias de la Salud, nº de expediente ll-2020_16.* Hospital Nacional de Parapléjicos, Toledo, Spain.
- 2017-2020: *PhD Student*, fellowship At Biomedical Research Center, University of Vigo, Vigo
- 2016-2017: *Master student,* fellowship At Biomedical Research Center (CINBIO), University of Vigo, Vigo
- 2011-2015: Undergraduate student, U.N.E.D., Madrid

MAIN RESEARCH LINES

1) The properties of K2P (TREK) potassium channels and currents in parasympathetic neurons from the Intracardiac ganglion.
2) Role of GABAergic neuronal populations in cortical reorganization after spinal cord injury.

SCIENTIFIC PUBLICATIONS:

Publications

2021

1. Diz-Chaves Y., **Herrera-Pérez S.** and Mallo F. (**2021**). Effects of Glucagon-like peptide 1 (GLP-1) analogs on hippocampus. On Hormones and Hippocampus. Ed: Litwack G. Elsevier: *Submitted*

2020

2. †Diz-Chaves Y., †**Herrera-Pérez S.**, González-Matías L.C. Lamas JA and Mallo F. (**2020**). Glucagon-Like Peptide-1 (GLP-1) in the Integration of Neural and Endocrine Responses to Stress. †*These authors contributed equally to this work.* Nutrients 2020,12(11). (SJR, **Q1)**
3. Rivas-Ramírez, P.; Reboreda, A.; Rueda-Ruzafa, L.; **Herrera-Pérez, S** and Lamas JA. (**2020**). Contribution of KCNQ and TREK channels to the resting membrane potential in sympathetic neurons at physiological temperature. Int J Mol Sci 2020, 21(16). (SJR, **Q1)**
4. Rivas-Ramírez P, Reboreda A, Rueda-Ruzafa L, **Herrera-Pérez S** and Lamas JA. (**2020**). PIP2 Mediated Inhibition of TREK Potassium Currents by Bradykinin in Mouse Sympathetic Neurons. Int J Mol Sci 21:389. (SJR,**Q1**)

2019

5. Lamas JA, †Rueda-Ruzafa L, †**Herrera-Pérez S** (**2019**). Ion Channels and Thermosensitivity: TRP, TREK, or Both? Int J Mol Sci 20. †*These authors contributed equally to this work.* (SJR,**Q1**)

2018

6. Fernández-Fernández D., Cadaveira-Mosquera A., Rueda-Ruzafa L., **Herrera-Pérez S.** Veale EL., Reboreda A., Lamas JA. (**2018**). Activation of TREK currents by riluzole in three subgroups of cultured mouse nodose ganglion neurons. PLoS ONE 13(6). (**SJR, Q2**)

Short communications - Conference papers

1. **Herrera-Pérez, S**.; Rueda-Ruzafa, L.; Campos Rio, A.; Rodríguez, A.; Lamas, JA. (2019) Class IV antiarrhythmic drugs reduce the current through trek channels in mouse intracardiac ganglion neurons. (Abstract) 18th National Meeting of the Spanish Society of Neuroscience. Santiago de Compostela, Spain. 4-6 Sep-2019.
2. **Herrera-Pérez, S**.; Rueda-Ruzafa, L.; Campos Rios, A.; Rodríguez, A.; Lamas, JA. (2019) TREK channels activators, induces an outward K+ current in parasympathetic neurons of the mouse intracardiac ganglion. (Abstract) XV Conference for young researches in Neuroscience. A Coruña, Spain. 19 July-2019.
3. Campos-Ríos A, **Herrera- Pérez, S.**; Rueda-Ruzafa, L.; Rodríguez-Piñeiro A.; Lamas JA. (2019) Effect of BL1249 in mouse sympathetic neurons. (Abstract) XV Conference for young researches in Neuroscience. A Coruña, Spain. 19 th July-2019
4. Rueda-Ruzafa, L.; **Herrera-Pérez, S**.; Campos Rio, A.; Rodríguez, A.; Lamas, JA. (2019) The increase of temperature activates potassium TREK channels in nodose ganglion neurons. (Abstract) XV Conference for young researches in Neuroscience. A Coruña, Spain. 19 th July-2019

5. Campos-Ríos A, **Herrera- Pérez, S.**; Rueda-Ruzafa, L.; Rodríguez-Piñeiro A.; Lamas JA. (2019) BL-1249 induces a clear hyperpolarization and a TREK-like current in mouse sympathetic neurons (Poster). III Annual Meeting CINBIO, Vigo, Spain. 1-2 th July-2019.
6. **Herrera-Pérez, S**.; Rueda-Ruzafa, L.; Campos Rio, A.; Rodríguez, A.; Lamas, JA. (2019) Riluzole, Bl-1249 and ML67-33 induce a trek-like potassium outward current in parasympathetic neurons of the mouse intracardiac ganglion. (Abstract). VII Congress of the Spanish Network of Ionic Channels (RECI). Cáceres, Spain. 15-17 th May-2019.
7. Rueda-Ruzafa, L.; **Herrera-Pérez, S**.; Campos Rio, A.; Rodríguez, A.; Lamas, JA. (2019) Increasing temperature activates TREK potassium channels in nodose ganglion neurons (Oral). VII Congress of the Spanish Network of Ionic Channels (RECI). Cáceres, Spain. 15-17 th May - 2019.
8. **Herrera-Pérez, S.;** Rueda-Ruzafa, L.; Silveira, M.; Fernández - Fernández, D.; Lamas JA.(2018) Verapamil inhibits k2p potassium channels and induces a Depolarization in cultured sympathetic neurons. (Abstract). XIV Conference for a young researchs. Vigo, Spain. 20 th July-2018.
9. Rueda-Ruzafa, L.; **Herrera-Pérez, S.;** Silveira, M.; Fernández- Fernández, D.; Lamas JA. (2018) Activation of potassium trek channels by physiological Temperature in nodose ganglion neurons. (Abstract) XIV Conference for young researches in Neuroscience. Vigo, Spain. 20 th July-2018.
10. **Herrera- Pérez, S.;** Rueda-Ruzafa, L.; Silveira, M.; Fernández - Fernández, D.; Lamas JA (2018). Verapamil inhibits k2p potassium channels and induces a Depolarization in cultured sympathetic neurons. (Abstract). 6th International Iberian Biophysics Congress. X Iberoamerican Congress of Biophysics. Castellón, Spain. 20-22 th Jun-2018.
11. Rueda-Ruzafa, L.; **Herrera- Pérez, S**. (2018**);** Silveira, M.; Fernández - Fernández, D.; Lamas JA. Activation of potassium trek channels by physiological Temperature in nodose ganglion neurons. (Abstract). 6th International Iberian Biophysics Congress. X Iberoamerican Congress of Biophysics. Castellón, Spain. 20-22 th Jun -2018.
12. **Herrera-Pérez, S. (2017)**; Rueda-Ruzafa, L.; Silveira, M.; Lamas JA. Efectos del Verapamilo sobre las corrientes de potasio y el potencial de membrana en reposo, en células de Ganglio Cervical Superior de ratón. (Abstract). XIII Conference for young researches in Neuroscience, Santiago de Compostela, Spain. 21 th-July-2017.
13. **Herrera- Pérez, S.** (2017); Rueda-Ruzafa, L.; Silveira, M.; Fernández- Fernández, D.; Lamas JA. Verapamil, a powerful blocker of the k2p potassium channels expressed in the autonomic nervous system (Poster). I Annual Meeting CINBIO, Vigo, Spain. 17-18 th Oct-2017.
14. Rueda-Ruzafa, L.; **Herrera- Pérez, S**; Rivas-Ramírez, P.; Reboreda, A.; Lamas JA (2017). Activation of potassium trek channels by mechanical and pH stimulation in nodose ganglion neurons (Poster): 17 National Congress of the Spanish Society of Neuroscience, Alicante, Spain. 27-30 th Sep-2017.
15. Rueda-Ruzafa, L.; **Herrera- Pérez, S**. (2017); Lamas JA. Intracellular acidification and membrane stretch induced the activation of potassium TREK channels in nodose ganglion neurons (Poster): Network of excellence SICI consolider - International Workshop, Santiago de Compostela, Spain. 27-30 th Sep-2017.
16. Lamas, JA.; Rueda-Ruzafa, L.; **Herrera- Pérez, S**. (2016); Reboreda, A.: Modulation of potassium TREK-channels by bradykinin (Abstract): Network of excellence sici consolider - International Workshop. Spain 5-9 th Sep-2016.

GRANTED RESEARCH PROJECTS:

Projects as Team Member

1. MICIU, PID2019-109425GB-I00. Two pore domain potassium channels (K2P-TREK) in parasympathetic neurons of the mouse intracardiac ganglion. Performing the tasks of cell culture

and electrophysiological records. (Patch-Clamp). José Antonio Lamas Castro. (Universidade de Vigo). 01/06/2020-31/05/2023. 36.500 €.

2. ED431G/02 (Regional government of Galicia). Performing the tasks of cell culture and electrophysiological records. In Accreditation, structuring and improvement of Singular Research Centers. Biomedical Research Center. Research groups: 13. IP of the Neuroscience group: J. Antonio Lamas. Scientific Director: Africa González. Total financing: € 1,750,000. Group Financing: ≈70,000 € Duration: 4 years, 2016-2019
3. MINECO, BFU2014-58999-P. Characterization of Two pore domain (K2P) potassium channels in ganglion nodosum neurons and their possible role in visceral sensitivity. Contract in charge of this project to performing the tasks of cell culture and electrophysiological records (Patch-Clamp). José Antonio Lamas Castro. (Universidade de Vigo). 01/01/2015-31/12/2017 + 1 year extended. 145.200 €.
4. GPC2015/022 (Regional government of Galicia). Consolidation and structuring projects of competitive research units of the Galician university system 2015. Groups with Growth Potential (GPC). Contract in charge of this project to performing the tasks of cell culture and electrophysiological records (Patch-Clamp). Researchers: J. Antonio lamas (IP), Federico Mallo and Lucas C. González. Financing: € 70,000. Duration: 3 years, 1/1 / 15 - 30 / 11/17

TEACHING AND FORMATIVE CAPACITY:

1. Co-tutored of Final Degree Project. "*Potassium channels and neuronal behavior*." *Pedro Fernández Maestú*. University of Vigo (Spain).
2. Co-tutored of Final Master's Project. "*Pharmacological characterization of the current activated by BL-1249 in sympathetic neurons of mice*." *Ana Campos Rios*. University of Vigo (Spain).
3. Co-tutored of Final Degree Project. "*pH effect on two-pore-domain potassium channels (K2P) in superior cervical ganglion neurons*." *Maria Silveira Loureiro*. University of Vigo (Spain).
4. Training seminar. Training Program in biomedicine and technology for life. University of Alicante. *Regulation of the autonomic nervous system on cardiac function: physiological and molecular aspects* (2021)
5. Scientific conference University of Vigo, *Two-pore domain potassium channels (K2P-TREK) in parasympathetic neurons of mouse Intracardiac Ganglion.* (2019)

ORGANIZATION OF RESEARCH AND ACADEMIC EVENTS

1. Co-organizer Organizing Committee of the CINBIO Open Days-Open Days 2018. Biomedical Research Center (CINBIO), University of Vigo,
2. Co-organizer and speaker At Week of science, of University of Vigo, 208, 2017

AWARDS:

1. **Thesis project** qualified as *Cum Laude*
2. **Best Research Project Prize (Poster Award)**, Biomedical Research Center (CINBIO), University of Vigo, Campos-Ríos A, **Herrera- Pérez, S.**; Rueda-Ruzafa, L.; Rodríguez-Piñeiro A.; Lamas JA. (2019) BL-1249 induces a clear hyperpolarization and a TREK-like current in mouse sympathetic neurons (Poster). III Annual Meeting CINBIO, Vigo, Spain. 1-2 th July-2019.
3. **Master project** qualified as *Honors*