JUAN C. SANCHEZ-ARIAS

MD (2014) & PhD Candidate in Neuroscience (2020)

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EXPERIENCE

Graduate Research Fellow

University of Victoria

Jan. 2015 – Ongoing Victoria, BC. Canada

- Advisor: Leigh Anne Swayne, PhD.
- Area of Study: Area of study: Pannexin 1 channels, dendritic spine plasticity, synapse formation, channel trafficking, neuronal cytoskeleton dynamics, neural stem cells, advanced microscopy for cell biology.
  - Generated conditional and conditional-inducible knockout models for the study of cerebral cortex development.
  - Optimized protocols to generate primary neuronal cultures from neonatal mice suitable for network analysis.
  - Developed methods to visualize dendritic spines and filopodia in tissue sections and living primary neurons.
  - Established immunocyto(histo)chemistry protocols that preserve the neuronal cytoskeleton.

Pre-Diploma Rotatory Medicine & Surgery Internship

School of Medicine - Uniersidad del Valle

Sept. 2013 – Sept 2014 Cali, Valle. Colombia

- Hospital Universitario del Valle ESE - Universidad del Valle.

Research Intern in Biomedical Sciences - Neuroscience

Centro de Estudios Cerebrales - Universidad del Valle

Feb. 2014 – July 2014 Cali,Valle. Colombia

- Advisors: Prof. Martha Escobar, MSc; Prof. Hernan Pimienta, MSc, Prof. Efrain Buritica, MSc, PhD.
- Area of study: functional neuroanatomy, cerebral cortex organization, traumatic brain injury, stroke, neuroprotection.

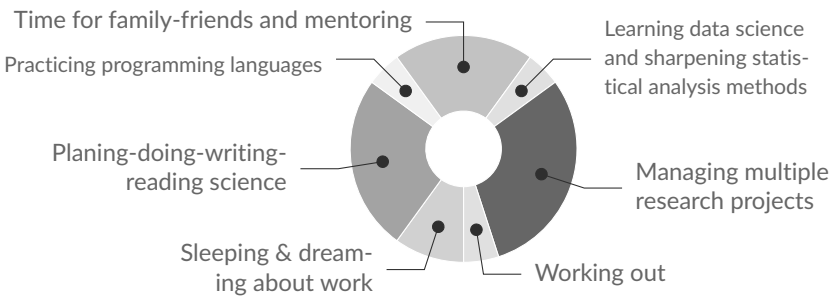
Student Researcher

Schol of Public Health - Universidad del Valle

Aug. 2010 – Feb. 2011 Cali, Valle. Colombia

- Advisors: Enrique A. Esteves-Rivera, MD and Elsa P. Muñoz, MD, MPH
- Area of study: Cardiovascular risk factor assessment in spinal cord injured patient assisting to a tertiary-level hospital.
  - Prepared research project proposals, liaised with ethical boards, and established a network of collaborators to complete the study using a standarized survey.
  - Prepared data management plan, data collection, and statistical analysis.
  - Contributed to the assessment and management of patients with chronic spinal cord injury.

A DAY OF MY LIFE



LIFE PHILOSOPHY

"Any person could, if they were so inclined, be the sculptor of their own brain." Santiago Ramon y Cajal

MOST PROUD OF

Academic accomplishments
that have allowed me to explore and understand the impact of basic science in the advancement of medicine.

Persistence & Loyalty
to pursue my goals and dreams, overcoming geographical boundaries, biases, and naysayers.

Biomedical Research Network
that I have built nationaly and internationally across mulltiple complimentary disciplines.

Science Outreach
initiatives that have connected me with the public and motivate younger generations for a carrer in science and medicine.

STRENGTHS

Creative | Perseverance | Resourceful | Motivational Leadership | Basic Science Research | Clinical Research | Neuroscience | Science Communication & Outreach | Project Management

LANGUAGES

English
Spanish
R (programming language))

EDUCATION

PhD in Neuroscience

University of Victoria

Jan. 2015 – Apr. 2020

MD (Medico y Cirujano)

Universidad del Valle

Aug. 2007 – Sept. 2014

PUBLICATIONS

- **Juan C. Sanchez-Arias**, Rebecca C. Candlish, and Leigh Anne Swayne (Mar. 5, 2020). “Pannexin 1 regulates spiny protrusion dynamics in cortical neurons”. In: *bioRxiv*, p. 973917. DOI: 10.1101/2020.03.02.973917.
- Chen, Lena, Catherine S. W. Choi, **Juan C. Sanchez-Arias**, Laura T. Arbour, and Leigh Anne Swayne (Dec. 2019). “Ankyrin-B p.S646F undergoes increased proteasome degradation and reduces cell viability in the H9c2 rat ventricular cardiomyoblast cell line”. In: *Biochemistry and Cell Biology*. DOI: 10.1139/bcb-2019-0082.
- Choi, Catherine S. W., Ivana A. Souza, **Juan C. Sanchez-Arias**, Gerald W. Zamponi, Laura T. Arbour, and Leigh Anne Swayne (Sept. 2, 2019). “Ankyrin B and Ankyrin B variants differentially modulate intracellular and surface Cav2.1 levels”. In: *Molecular Brain* 12.1, p. 75. ISSN: 1756-6606. DOI: 10.1186/s13041-019-0494-8.
- Epp, Anna L., Sarah N. Ebert, **Juan C. Sanchez-Arias**, Leigh E. Wicki-Stordeur, Andrew K. J. Boyce, and Leigh Anne Swayne (July 5, 2019). “A novel motif in the proximal C-terminus of Pannexin 1 regulates cell surface localization”. In: *Scientific Reports* 9.1, p. 9721. ISSN: 2045-2322. DOI: 10.1038/s41598-019-46144-5.
- Frederiksen, Simona D., Leigh E. Wicki-Stordeur, **Juan C. Sanchez-Arias**, and Leigh Anne Swayne (Oct. 11, 2019). “Exploring the Pannexin 1 interactome: In silico cross-analyses with postsynaptic proteins and neuropsychiatric disorder susceptibility genes”. In: *bioRxiv*, p. 801563. DOI: 10.1101/801563.
- **Juan C. Sanchez-Arias**, Mei Liu, Catherine S. W. Choi, Sarah N. Ebert, Craig E. Brown, and Leigh Anne Swayne (May 22, 2019). “Pannexin 1 Regulates Network Ensembles and Dendritic Spine Development in Cortical Neurons”. In: *eNeuro* 6.3, ENEURO.0503–18.2019. ISSN: 2373-2822. DOI: 10.1523/ENEURO.0503-18.2019.
- Xu, Xiaoxue, Leigh E. Wicki-Stordeur, **Juan C. Sanchez-Arias**, Mei Liu, Maria S. Weaver, Catherine S. W. Choi, and Leigh A. Swayne (May 11, 2018). “Probenecid Disrupts a Novel Pannexin 1-Collapsin Response Mediator Protein 2 Interaction and Increases Microtubule Stability”. In: *Frontiers in Cellular Neuroscience* 12. ISSN: 1662-5102. DOI: 10.3389/fncel.2018.00124.
- Gunton, Adrianna N., **Sanchez-Arias, Juan C.**, Esther O. Carmona-Wagner, Leigh E. Wicki-Stordeur, and Leigh Anne Swayne (May 15, 2017). “Upregulation of inflammatory mediators in the ventricular zone after cortical stroke”. In: *PROTEOMICS – Clinical Applications* 11.9, p. 1600092. ISSN: 1862-8354. DOI: 10.1002/prca.201600092.
- **Juan C. Sanchez-Arias**, Leigh E. Wicki-Stordeur, and Leigh Anne Swayne (Nov. 4, 2016). “Perspectives on the role of Pannexin 1 in neural precursor cell biology”. In: *Neural Regeneration Research* 11.10, pp. 1540–1544. ISSN: 1673-5374. DOI: 10.4103/1673-5374.193221.
- Swayne, Leigh Anne, **Juan C. Sanchez-Arias**, Agbay Andrew, and Stephanie M. Willerth (Sept. 22, 2016). “What Are Neural Stem Cells, and Why Are They Important?” In: *Frontiers for Young Minds* 4.20, p. 7. DOI: 10.3389/frym.2016.00020.
- Wicki-Stordeur, Leigh E., **Juan C. Sanchez-Arias**, J. Dhaliwal, Esther O. Carmona-Wagner, Valery I. Shestopalov, Diane C. Lagace, and Leigh Anne Swayne (Jan. 27, 2016). “Pannexin 1 Differentially Affects Neural Precursor Cell Maintenance in the Ventricular Zone and Peri-Infarct Cortex”. In: *Journal of Neuroscience* 36.4, pp. 1203–1210. DOI: 10.1523/JNEUROSCI.0436-15.2016.

REFEREES

Available upon request.