# JUAN C. SANCHEZ-ARIAS, MD, PHD

Trained as medical doctor and neuroscientist, I'm currently investigating the molecular and cellular mechanisms underlying cardiac arrythmias and seizures associated with a novel genetic variant in an ion channel adapter protein combining model organism research, clinical genetics and computational biology.



### **₹** EDUCATION

2020 2015

Doctor of Philosophy in Neuroscience

University of Victoria - Division of Medical Sciences

Victoria, BC, Canada

· Dissertation: Pannexin 1 regulates dendritic spine formation.

2014 2007 Doctor of Medicine (Médico y Cirujano)

Universidad del Valle - School of Medicine

• Cali, Valle, Colombia

- · Pre-Diploma Rotatory Internship: Hospital Universitario del Valle ESE Universidad del Valle. Cali, Valle. Colombia.
- · Professional elective: Neurosurgery and Neurocritical Care. Department of Neurosurgery. Hospital Universitario del Valle ESE - Universidad del Valle. Cali, Valle.
- · Observership: Functional Neurosurgery. Department of Neurosurgery. University of Illinois Hospital & Health Sciences System. Chicago, IL. USA.



### CONTACT

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View my full CV online

### RESEARCH EXPERIENCE

Current 2020

Postdoctoral Fellow - Michael Smith Health Research BC Awardee Division of Medical Sciences

University of Victoria

- · Area of study: Inherited arrhythmias, community genetics, bioinformatics, ion channel biology, calcium homeostasis in cardiomyocytes.
- · Roles: Project and data management, research execution, presentation of results, and grant and research writing.
- · Techniques: RNA seq and microarray gene expression analysis using R and bioconductor tools (DESeq2, oligo, limma).
- · Analysis of protein-protein interaction networks and pathway enrichment analysis using R and Cytoscape.
- · Immunohistochemistry and confocal microscopy of embryonic and adult mouse heart sections.

2020 2015

#### Graduate Research Assistant

Division of Medical Sciences

- University of Victoria
- · Area of study: Ion and metabolite channels, developmental neurobiology, channel trafficking, cytoskeletal dynamics, neural stem cells, advanced microscopy.
- · Roles: Project and data management, research execution, presentation of results, and grant and research writing.
- · Techniques: Fixed and live-cell fluorescence microscopy of cultured neurons. Immunocytochemistry. Super-resolution microscopy.
- · Analysis of calcium imaging data from cultured neurons using MATLAB.

2014 2013

#### Research Medical Intern

Centro de Estudios Cerebrales

• Universidad del Valle

- · Area of study: functional neuroanatomy, cerebral cortex organization, traumatic brain injury, stroke, neuroprotection.
- · Roles: Support and execution of experimental research on traumatic brain injury and ischemic stroke in rats.
- · Techniques: Immunohistochemistry and confocal microscopy of rat brain sections.

## TECHNICAL **SKILLS**

Scientific Writing

Made with the R package **pagedown** and datadrivency.

Source code available

juansanar/datadrivencv



Last updated on 2022-0.5-16

2011 2010

### Undergraduate Medical Researcher

School of Public Health

- Universidad del Valle
- · Area of study: Cardiovascular risk health, spinal cord injury, rehabilitation medicine, public health.
- · Roles: Project management, data management with Epi Info, research execution, grant and research writing, and presentation of results to stakeholders.
- · Supported clinical assessment of patients in the spinal cord injury clinic.

## SERVICE & LEADERSHIP

Current 2021

### Who Can Become a Scientist?

Co-founder and Co-organizer

University of Victoria

- · "Who can become a scientist?" is a workshop for high school students that discusses equity, diversity, and inclusion issues in STEMM.
- · It reflects on the stereotypical image of scientists and the importance of leveraging support from role models and mentors to increase diversity in STEMM.

Current 2018

#### Let's Talk Science

University of Victoria

Victoria, BC, Canada

· Volunteer for public audience presentations and high school science tours.

Current 2017

#### CIHR Brain Bee

Victoria Chapter

Victoria, BC, Canada

- · Organize and coordinate social media outlets for the Victoria Brain Bee. Mentored high school students from the Greater Victoria Area who participated in the Brain Bee
- · Secured funding to sponsor Victoria Brain Bee winners traveling to the CIHR National Brain Bee.

2020 2017

### Neuroscience Graduate Student Association (NGSA)

University of Victoria

🗣 Victoria, BC, Canada

- · Student Representative Division of Medical Sciences 2017-2018.
- · Contributed to organizing the Neuroscience Graduate Program Kick-Off. Liaised and recruited keynote speakers for seminar lectures.

2019 2017

#### BCREGMED Newsletter

Co-editor

BCREGMED

· Co-organized the BC Regenerative Medicine Symposium and Trainee workshop. Liaise with speakers and sponsors. Served as scientific committee member for abstract review and evaluation.



### OTHER EDUCATION

2022 2022

### Curso Introductorio en Epidemiologia Genetica y Epigenetica

Universidad del Valle - School of Public Health

Virtual

· Two-week introductory course on Genetic Epidemiology and Epigenetics offered by the School of Public Health at Universidad del Valle

2021 2021

### CodeinPlace 2021

Stanford University

Virtual

- · April-May 2021: Completed a 5-week introductory online Python programming course based on material from the first half of Stanford's introductory programming course, CS106A
- · Project Showcase #153: BrainBeez

#### Selected presentations

2022

45 Annual Meeting of the Canadian Society for Molecular Biosciences | An integrative systems biology and experimental approach to study the impact of a novel variant in ANK2 membrane-binding domain associated with cardiac arrhythmia and cardiomyopathy | Poster

#### 2021

COLNE - Tertulia Metodologica | Flujos de Trabajo para Analisis de Imagenes Adquiridas por Microscopia (Bioimage analysis workflows) | Talk

#### 2020

University of British Columbia 2<sup>nd</sup> Annual Tri-Cluster Research Day: The Future of Health | Pannexin 1 regulates dendritic protrusion dynamics in developing cortical neurons | Talk

#### 2019

International Gap Junction Conference | Pannexin 1 regulates neuronal networks and dendritic spine formation in cortical neurons | Star Award Talk

#### 2018

Society for Neuroscience | Pannexin 1 regulates somatosensory pyramidal neuron dendritic spine density and sensorimotor function | Poster

#### 2017

BC Regenerative Medicine Symposium | Pannexin 1 regulates cortical dendritic spine formation | Talk