# Juan C. Sanchez-Arias, MD, PhD

Trained as medical doctor and neuroscientist, I use my expertise in neurobiology, computational biology, and experimental design to magnify the impact of BenchSci's platform and mission to empower scientists to improve the speed and quality of preclinical research with the most advanced biomedical AI.

## 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. Colombia.
- **Observership:** Functional Neurosurgery. Department of Neurosurgery. University of Illinois Hospital & Health Sciences System. Chicago, IL. USA.

## INDUSTRY EXPERIENCE

Current | 2022

### Scientific Associate (Experimental Data)
BenchSci — Remote

- Envision and evaluate features to improve BenchSci's platform and future roadmap using scientific insights.
- Work in collaboration with Product and Engineering teams to magnify the impact and applications of BenchSci's platform.
- Work in collaboration with R&D to improve the data processing cycle within BenchSci's platform.

## RESEARCH EXPERIENCE

2022 | 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.

## CONTACT


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View my full CV online

## TECHNICAL SKILLS

- Project Management
- Scientific Writing
- Microscopy
- Immunofluorescence
- Cell culture
- Bio-image analysis
- Biostatistics
- R
- Python
- Bash
- MATLAB


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

*Source code available at juansanar/datadrivencv.*

*Last updated on 2022-07-03.*

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.

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.

2022 | 2018

### Let's Talk Science
University of Victoria — Victoria, BC, Canada

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

2022 | 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 competition.
- 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

- 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**

**65 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 arrhythmias and cardiomyopathy | *Poster*

**2021**

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

**2020**

**University of British Columbia 2 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*

**2017**

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