Curriculum Vitae CESAR ADOLFO SANCHEZ TRIVIÑO

PERSONAL INFORMATION:
Date of Birth: 13 / 11 / 1992
Nationality: [redacted]
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EDUCATION:

2024-Present Posdoc position in Neurobiology sector, Scuola Internazionale Superiori di Studi Avanzati, Trieste, Italy.

2019-2024 Neurobiology PhD Program Scuola Internazionale Superiori di Studi Avanzati, Trieste, Italy.

2017-2019 Biology Master program, *Universidad Nacional de Colombia*, Bogotá, Colombia Magister of Science degree, September 2019. Scores 4.4 / 5.0

2011-2016 Biology Program, *Universidad Nacional de Colombia*, Bogotá, Colombia - Bachelor of Science degree, August 2016. Scores 4.4 / 5.0

EXPERIENCE:

November 2019 - 2024

- PhD in Neurobiology (Modulation of neuronal activity recorded with patch clamp and calcium imaging techniques) Supervisors: Anna Menini.

January - July 2023

- Professor and leader of Cellular Biology and Animal Physiology of high school students, representation for international biology Olympiad (IBO). Al Ain-UAE 2023.

September - October 2019

- Pre-PhD Fellowship of short duration, Scuola Internazionale Superiori di Studi Avanzati, Trieste, Italy.

January 2018 – August 2019

- Research Assistant in the project. Effect of lithium on currents coupled to PLC signaling pathway in a neuronal line, (Centro Internacional de Física- *Universidad Nacional de Colombia*) Supervisors: Enrico Nasi, Ph.D and Pilar Gomez, M.D., Ph.D.

August – September 2018

- Professor and leader of Cellular Biology and Animal Physiology of high school students, representation for *Olimpiada iberoamericana de biologia* (OIAB). Loja-Ecuador.

- Professor and leader of Cellular Biology and Animal Physiology of high school students, representation for international biology Olympiad (IBO). Teheran-Iran 2018.

January – July 2017

- Research trainee in electrophysiology and calcium fluorescence measurements, (Centro Internacional de Física- *Universidad Nacional de Colombia*) Supervisors: Enrico Nasi, Ph.D and Pilar Gomez, M.D., Ph.D.

- Professor of Cellular Biology and Animal Physiology by training of student young, representation for international biology Olympiad (IBO). united kingdom 2017.

January – July 2016

- Student auxiliary in asignature animal biology (*Departamento de biologia- Universidad Nacional de Colombia)* Supervisor: Adriana Jerez, Ph.D.

January – November 2015

- Research Assistant in the project: "Pattern and confirmation of *serrate 1* gene expression in developing tissues of facial prominences and pharyngeal arches in chick embryos". (Growthand Facial Development Research Group -*Universidad Nacional de Colombia – Facultad de Odontologia*.

PUBLICATIONS

- **Sánchez Triviño CA**, Landinez MP, Duran S, Gomez MDP, Nasi E. Modulation of Gq/PLC-Mediated Signaling by Acute Lithium Exposure. Front Cell Neurosci. 2022 Feb 15;16:838939. doi: 10.3389/fncel.2022.838939. PMID: 35242014; PMCID: PMC8885521.

- Spelat, R.*, Jihua, N.*, **Sánchez Triviño, C.A.*** et al. The dual action of glioma-derived exosomes on neuronal activity: synchronization and disruption of synchrony. Cell Death Dis 13, 705 (2022). https://doi.org/10.1038/s41419-022-05144-6
  * Equal contribution

- Hernandez-Clavijo A*, **Sánchez Triviño CA***, Guarneri G*, Ricci C, Mantilla-Esparza FA, Gonzalez-Velandia KY, Boscolo-Rizzo P, Tofanelli M, Bonini P, Dibattista M, Tirelli G, Menini A. Shedding light on human olfaction: Electrophysiological recordings from sensory neurons in acute slices of olfactory epithelium. iScience. 2023 Jun 21;26(7):107186. doi: 10.1016/j.isci.2023.107186. PMID: 37456832; PMCID: PMC10345129.
  * Equal contribution

- Ye Z, Galvanetto N, Puppulin L, Pifferi S, Flechsig H, Arndt M, **Triviño CAS**, Di Palma M, Guo S, Vogel H, Menini A, Franz CM, Torre V, Marchesi A. Structural heterogeneity of the ion and lipid channel TMEM16F. Nat Commun. 2024 Jan 2;15(1):110. doi: 10.1038/s41467-023-44377-7. PMID: 38167485; PMCID: PMC10761740.

- Li Y*, **Sánchez Triviño CA***, Hernandez-Clavijo A, Mortal S, Spada F, Krivosheia I, Franco N, Spelat R, Cesselli D, Manini I, Skrap M, Menini A, Cesca F, Torre V. Mechanisms of glioblastoma replication: Ca2+ flares and Cl- currents. Molecular Cancer Research.
  * Equal contribution

- **Sanchez Trivino CA**, Spelat R, Spada F, D'Angelo C, Manini I, Rolle IG, Ius T, Parisse P, Menini A, Cesselli D, Skrap M, Cesca F, Torre V. Exosomal TNF-α mediates voltage-gated Na+ channel 1.6 overexpression and contributes to brain tumor-induced neuronal hyperexcitability. J Clin Invest. 2024 Aug 1;134(18):e166271. doi: 10.1172/JCI166271. PMID: 39088270; PMCID: PMC11405049.

- **Sánchez Triviño CA**, Hernandez-Clavijo A, Gonzalez-Velandia KY, Pifferi S, Menini A. Noradrenaline modulates sensory information in mouse vomeronasal sensory neurons. iScience. 2024 Sep 2;27(10):110872. doi: 10.1016/j.isci.2024.110872. PMID: 39328934; PMCID: PMC11424947.

COURSES

- Ion channels and neural excitability (NERKA8, 2021) Kotor, Montenegro. Organized by University of Belgrade and University of Montenegro.

- Latin American Training Program (LATP: Signal processing: from single molecules to brain circuits), summer course (2017: *Cali, Colombia*) *Universidad de Valle* and Society for Neuroscience.

MEETINGS AND WORSHOPS

- 19th International Symposium on Olfaction and Taste (ISOT, 2023) Reykjavík, Iceland.
  (Poster participation)
  Title: Alpha-1 adrenergic receptors modulates spiking activity in vomeronasal sensory neurons.

- European chemoreception research organization (ECRO, 2022) Berlin, Germany.
  (poster participation)
  Title: Norepinephrine enhances spiking discharge in Vomeronasal Sensory Neurons through voltage-gated sodium channels modulation

- SfN meeting (2021)
  (Poster participation)
  Title :Acute lithium administration enhances Gq/PLC- mediatedsignaling.
  Exhibitor: Pilar Gomez, M.D., Ph.D.

- Assistant to European Chemoreception research organization meeting (ECRO 2019-2020) Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.

- VIII National neuroscience meeting and IX International seminar of neuroscience (2018) Bogota-Colombia. *Universidad Externado de Colombia.*
  (Poster participation)
  Title: Lithium effect on ionic current activated by PLCβ Pathway in neuronal lines.

- Frontiers in olfaction meeting (2017). Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.

- Latin American society development biology meeting (2017). *Universidad de Antioquia*, International center for genetic engineering and biotechnology-New Delhi.
  (Poster participation)
  Title: Serrate 1 in cell layers of ectoderm and endoderm of pharyngeal arches in chick embryo and overlapping with apoptosis.

- Assistant for the first meeting national of Development Biology (2015) (*Universidad Nacional de Colombia y Universidad de los Andes, Bogota, Colombia*).

AWARDS

- Scholarship for participation: Ion channels and neural excitability (NERKA8, 2021) Kotor, Montenegro.
- Meritorious magister thesis *Universidad Nacional de Colombia* Bogotá, Colombia (2019).
- Scholarship to participate of Latin American society development biology meeting (2017). *Universidad de Antioquia*, International center for genetic engineering and biotechnology-New Delhi.
- Scholarship for participation in frontiers in olfaction meeting (2017). Abdus Salam International Centre for Theoretical Physics (ICTP), Trieste, Italy.
- Chosen student and scholarship for the Latin American Training Program (LATP: Signal processing: from single molecules to brain circuits), summer course (2017: *Cali, Colombia*) *Universidad de Valle* and Society for Neuroscience.
- Scholarship with tuition remission (2012-2016) Department of - Biology, *Universidad Nacional de Colombia*
- Automatic admission to the Master's Program (Biology, *Universidad Nacional de Colombia*), awarded to students graduating in the top 10% of their class.
- 2015: Winner, '*Eficiencias*' Exam, Biology area (test administered to students about to graduate across most public universities in Colombia)

LABORATORY SKILLS:

- **Cell Culture:**
  Proficient in the maintenance and culture of cell lines and primary dissociated hippocampal neurons.
- **Electrophysiology:**
  Skilled in conducting electrophysiological patch-clamp recordings on dissociated cells and slices.
- **Molecular Biology:**
  Experience in transfecting ion channels in cell lines (HEK293).
  Competent in Reverse Transcription-PCR (RT-PCR) for molecular analysis.
- **Fluorescence Techniques:**
  Conducts calcium fluorescence measurements using inorganic dyes on both cell lines and slices.
  Proficient in immuno-fluorescence assays and in situ hybridization on cell lines, chicken embryos, main olfactory epithelium and vomeronasal organ of mice.
- **Microscopy:**
  Proficient in the acquisition of immunofluorescence images through epifluorescence and confocal microscopy.
- **Histology:**
  Skilled in the dissection of vomeronasal organs and sensory epithelium in both pups and adult mice.
  Competent in preparing paraffin sections and conducting general histological stains.

- **LANGUAGES:** Spanish (Native tongue)
  English (Advanced)
  Italian (Advanced)