# AIDA LOPEZ-ORTIZ

Ottawa, Canada | Email: ailopez@ohri.ca| lopezortiz.bio |Phone: +1 (434) 328-0923

## SUMMARY

Multidisciplinary neuroscience researcher with expertise in neuroimmunology, glial biology, and neurovascular interactions. Experienced in transcriptomics, advanced imaging, and in vivo disease models. Current research focuses on mechanisms of brain repair and vascular regeneration after stroke. Demonstrated success in cross-disciplinary and multicultural collaboration and strong scientific communication skills.

## EDUCATION

**Neuroscience Graduate Program, School of Medicine University of Virginia, Charlottesville, Virginia, USA**

- Ph.D. in Neuroscience. Major: Neuroimmunology. Mentor: Ukpong Eyo, Ph.D. Thesis: Novel Roles of P2RY12 in Regulating Microglial States and Early Neurodegeneration in 5xFAD Mice — **May 2026**
- Master of Science M.Sc. Major: Biological and Physical Sciences — **August 2024**

**Facultad de Ciencias, Universidad de Venezuela, Caracas, Venezuela**

- Bachelor of Science B.S. in Biology — **July 2015**

## RESEARCH

**Postdoctoral Fellow — Lacoste Lab, OHRI, Canada** **Jun 2026**

Exploring astrocyte–vascular interactions and molecular mechanisms of brain repair after stroke.

**Graduate Research Assistant — Eyo Lab, UVA, USA** **Apr 2022- May 2026**

This work resulted in 2 first-author publications (including 1 review in Journal of Neurochemistry and 1 original research article in Glia) and 3 co-author publications in high-impact journals such as Nature Communications, Nature Neuroscience (submitted), and iScience (revised)

- Key Contribution: Characterized microglial and astrocytic features in P2RY12KO models, integrating RNA-sequencing with imaging to investigate neuroinflammation and metabolic states .

**Graduate Research Assistant — IMEX-ANM, Buenos Aires, Argentina** **Jul 2018 - Jul 2021**

This research led to 4 co-author publications in recognized journals such as Platelets, Frontiers in Immunology, Neuroscience, and Current Opinion in Physiology .

- Key Contribution: Investigated macrophage responses to viral infections and studied the role of neutrophil extracellular traps (NETs) in systemic inflammation.

**Undergraduate Research Assistant — IVIC, Venezuela** Jul 2012 - May 2014

This foundational research role provided technical training in molecular biology, genomic studies as well as bioinformatic tools to analyze sequencing data.

- Key Contribution: Conducted molecular studies on Anopheles mosquito insecticide resistance mechanisms.

## PUBLICATIONS

- Sanchez, G., Ren, Y., Estades Ayuso, V., Rego, S., Pinho-Correia, L. M., das Neves, S. P., Delivanoglou, N., **Lopez-Ortiz, A. O.**, Duffy, A., Barber, M. J., Schrader, R., Sacilotto, P., Chen, Y., Pridans, C., Eyo, U. B., Zhao, N., & Da Mesquita, S. Maladaptive brain border-associated macrophages cause meningeal lymphatic impairment and neuroinflammation. (Submitted to Nature Neuroscience on March 2026).
- Fremuth, L. E., Gibbs-Shelton, S., Doceti, M., **Lopez-Ortiz, A. O.**, Duffy, A., Gaykema, R. P., ... & Eyo, U. B. (2025). Microglia and its P2RY12 Receptors Regulate Seizure Severity. bioRxiv, 2025-12. (Accepted iScience on April 2026)
- **Lopez-Ortiz, A. O.**, Doceti, M., Thomas, J., Duffy, A., Coburn, M., K Okojie, A., Lee, A., Sou, E. A., Gaultier, A., & Eyo, U. B. (2025). Transcriptional Regulation of Microglial Metabolic and Activation States by P2RY12. Glia, 10.1002/glia.70078. Advance online publication.
- Mills III, W. A., Savory, N. A., **Lopez-Ortiz, A. O.**, Lentferink, D. H., González Ibáñez, F., Agochi, P., ... & Eyo, U. B. (2025). Microglial cyclooxygenase-1 modulates cerebral capillary basal tone in vivo in mice. Nature Communications, 16(1), 5704.
- **Lopez-Ortiz, A. O.**, & Eyo, U. B. (2024). Astrocytes and microglia in the coordination of CNS development and homeostasis. Journal of Neurochemistry, 168(10), 3599–3614.
- Tomatis, C., León, A., **Lopez Ortiz, A. O.**, Oneto, P., Fuentes, F., Ferrer, M. F., Silva, E. A. C., et al. (2023). Theiler's murine encephalomyelitis virus replicates in primary neuron cultures and impairs spine density formation. Neuroscience, 529, 162–171.
- Gómez, R. M., **López Ortiz, A. O.**, & Schattner, M. (2021). Platelets and extracellular traps in infections. Platelets, 32(3), 305–313.
- Gómez, R. M., **Lopez Ortiz, A. O.**, & Schattner, M. (2021). New roles of platelets in inflammation. Current Opinion in Physiology, 19, 99–104.
- Ferrer, M. F., Thomas, P., **López Ortiz, A. O.**, Errasti, A. E., Charo, N., et al. (2019). Junin virus triggers macrophage activation and modulates polarization according to viral strain pathogenicity. Frontiers in Immunology, 10, 2499.

## SELECTED PRESENTATIONS

- **Aida O. Lopez**, Morgan Coburn, Kenneth Okojie, and Ukpong Eyo.

Title: P2RY12 Regulates Microglial Immuno-Metabolic States
2025 Glial Biology: Functional Interactions Among Glia and Neurons, Gordon Research Seminar and Conference. Ventura Beach Marriott, CA. March 8–14, 2025 (oral & poster presentation)

- **Aida O. Lopez**, Morgan Coburn, Kenneth Okojie, and Ukpong Eyo.

Title: P2RY12 Regulates Microglial Immuno-Metabolic States
2025 Glial Biology: Functional Interactions Among Glia and Neurons, Gordon Research Seminar and Conference. Ventura Beach Marriott, CA. March 8–14, 2025 (oral & poster presentation)

- **Aida O. Lopez** and Ukpong B. Eyo.

Title: Role of P2RY12 Deficiency in Microglial Metabolic Reprogramming and Inflammatory Response in the CNS
ReThinkNeuroimmunology Symposium. Washington University (WashU), St. Louis, MO. Sept 24–27, 2024 (poster presentation)

- **Aida O. Lopez** and Ukpong B. Eyo.

Title: Sex-Dependent and Independent Regulation of Microglial Immunometabolism by P2RY12
UVA Brain Symposium. University of Virginia, Charlottesville, VA. May 21–23, 2024 (poster presentation)

- **Aida O. Lopez** and Ukpong B. Eyo.

Title: Microglial P2RY12-dependent regulation of astrocytic features
Society for Neuroscience (SfN) 2023. Washington, D.C., US. November 11-15, 2023 (poster presentation)

- **Aida O. Lopez** and Ukpong B. Eyo.

Title: Sex-Dependent Cortical Astrocytic Features in P2RY12 Mutant Mice
American Society for Neurochemistry (ASN) 53rd Annual Meeting. Lexington, KY, US. March 18–22, 2023 (poster presentation)

## HONORS & AWARDS

- iPRIME Fellowship, UVA (2024–2025)
- Oral Presentation Award, Immunology Research Day, UVA (2024)
- Neuroscience Photo Contest of the Brain Institute, UVA (2023)
- SfN Trainee Professional Development Award (2023)
- Peach Fellowship, BIMS at UVA (2022)
- ALBA-FKNE-YIBRO grant to access the FENS 2020 Virtual Forum (2020)
- National Agency for Scientific and Technological Promotion ANPCyT, Argentina (2018–2021)

## SKILLS

- **Bioinformatics:** Transcriptopmic and proteomic analyses using R. Experience writing Bash scripts and working in high-performance computing (HPC) environments based on Unix/Linux systems.
- **Imaging:** Confocal microscopy. ImageJ & Imaris data processing.
- **Cell and Molecular Biology:** qPCR, IF, IHC, flow cytometry, cell culture.
- **Languages:** English (Fluent), Spanish (Native).

## LEADERSHIP & MENTORSHIP

- Mentor, Harrison Undergraduate Research Award (2025)
- Mentor, Double Hoos Fellowship (2024)
- President, Latin American Graduate Student Association LGSA – UVA (2023–2026)