

Christian A. Porras, Ph.D.
Icahn School of Medicine at Mount Sinai
Center for Disease Neurogenomics
1 Gustave L. Levy Place
New York, NY 10029-5674
christian.porras@icahn.mssm.edu
ORCID: <https://orcid.org/0000-0002-2621-6753>

Education

Icahn School of Medicine at Mount Sinai, M.D./Ph.D. Candidate (June 2020 - Present)

- Dissertation Advisor: [Panos Roussos, MD, PhD](#)
- Co-mentor: [Donghoon Lee, PhD](#)
- Ph.D. successfully defended September 2025

The University of Chicago, B.A. (June 2016 - June 2020)

- Honors Thesis Advisor: [John Novembre, PhD](#)
- Major: Biological Sciences
- Specialization in Quantitative Biology, with honors

Academic Positions

- (2025 – Present) Co-Principal Investigator, EHHOP CHARTS, East Harlem Health Outreach Partnership (EHHOP), Icahn School of Medicine at Mount Sinai (ISMMS)
- (2025 – 2026) Chief Research Director, East Harlem Health Outreach Partnership (EHHOP), Icahn School of Medicine at Mount Sinai (ISMMS)
- (2024, 2025) Teaching Fellow, Harvard T.H. Chan School of Public Health
- (2020 – Present) Graduate Researcher, Icahn School of Medicine at Mount Sinai
- (2021 – Present) Teaching Assistant, Icahn School of Medicine at Mount Sinai
- (2022 – Present) Primary Reviewer, Board Member, ISMMS Institutional Review Board (IRB)
- (2016 – 2020) Undergraduate Research Assistant, University of Chicago
- (2017 – 2020) Teaching Assistant, University of Chicago

Selected Publications

Journal Articles

- Blanc J, Steiner MC, Blake LE, Gibbons E, Ianni-Ravn MK, Morgan R, Parkinson S, **Porras C**, Zhong E. (2025) Ten simple rules for success as a trainee-led outreach organization in

computational biology education. PLOS Computational Biology 21(7): e1013281.
<https://doi.org/10.1371/journal.pcbi.1013281>

- M.C. Steiner, D.P. Rice, A. Biddanda, M.K. Ianni-Ravn, **C. Porras**, & J. Novembre, Study design and the sampling of deleterious rare variants in biobank-scale datasets, Proc. Natl. Acad. Sci. U.S.A. 122 (23) e2425196122, <https://doi.org/10.1073/pnas.2425196122> (2025).
- Choi, S. W., García-González, J., Ruan, Y., Wu, H. M., **Porras, C.**, Johnson, J., Hoggart, C. J., & O'Reilly, P. F. (2023b). PRSet: Pathway-based polygenic risk score analyses and software. PLoS Genetics, 19(2), e1010624. <https://doi.org/10.1371/journal.pgen.1010624>
- Dullea, J. T., Vasana, V., Devarajan, A., Ali, M., Nichols, N., Chaluts, D., Henson, P., **Porras, C.**, Lopez, C., Luna, D., Liou, L., Bederson, J., & Shrivastava, R. K. (2023). Utilization of palliative care services among patients with malignant brain tumors: an analysis of the National Inpatient Sample (2016-2019). Neurosurgery, 93(2), 419–426.
<https://doi.org/10.1227/neu.0000000000002428>
- Vasana, V., Dullea, J. T., Devarajan, A., Vasa, D., Ali, M., Nichols, N., Henson, P., **Porras, C.**, Lopez, C., Luna, D., Liou, L., Illoreta, A. M., Govindaraj, S., Bederson, J., & Shrivastava, R. K. (2023). Predictors of prolonged length of stay after pituitary adenoma resection: A large cohort analysis using the National Inpatient sample (2016-2019). American Journal of Rhinology and Allergy, 37(6), 758–765. <https://doi.org/10.1177/19458924231193527>
- Vasana, V., Dullea, J. T., Devarajan, A., Nichols, N., Ali, M., Chaluts, D., Henson, P., **Porras, C.**, Lopez, C., Luna, D., Liou, L., Bederson, J., & Shrivastava, R. K. (2022). Patterns in the Development of Postoperative Diabetes Insipidus after Pituitary Adenoma Resection: A 2016-2019 National Analysis. Research Square (Research Square).
<https://doi.org/10.21203/rs.3.rs-2097305/v1>

Preprints

- **Porras, C.**, Lee, D., Vicari, J. M., Spencer, C., Pjanic, M., Wang, X., Kinrot, S., Weiler, P., Kosoy, R., Bendl, J., Prashant, N. M., Psychogyiou, K., Malakates, P., Hennigan, E., Fortes, J. M., Zheng, S., Therrien, K., Mathur, D., Kleopoulos, S. P., . . . Roussos, P. (2023b). Plasticity of human microglia and brain perivascular macrophages in aging and Alzheimer's disease. medRxiv (Cold Spring Harbor Laboratory). <https://doi.org/10.1101/2023.10.25.23297558>
- Clarence, T., Masse, N., Porras, C., Prashant, N. M., Berretta, S., Haroutunian, V., Davis, D. A., Scott, W. K., Hoffman, G., Fullard, J., Lee, D., Bendl, J., & Roussos, P. (2025). A Transcriptomic Roadmap of Parkinson's Disease Progression at Single Cell Resolution (σ . 2025.07.30.25332436). medRxiv. <https://doi.org/10.1101/2025.07.30.25332436>

- **Porras, C. A.**, Afreen, R., Elikan, A., Toh, P., Agudelo, E., Matos, T., Kanpa, V. N., Powell, S. K., Appel, J. M., & Katz, C. (2023). Comparison of Symptom Burden Between Telepsychiatry and In-Person Care Across the COVID-19 Pandemic in a Student-Run Free Clinic. (in review)
- Ciocca, I., Hoang, D. T., Cukor, M., Porras, C. A., & Appel, J. M. Interpreter Services in a Student-Run Free Clinic: Perspectives from Patients, Providers, and Interpreters. (in review)

Fellowships and Awards

- (2026) Medical Student Excellence in Teaching Award, Institute for Medical Education, ISMMS
- (2025-2027) American College of Neuropsychopharmacology Near-Peer Mentorship Program - Selected as a mentee top 12 out of 75 early career scientists and clinicians
- (2025) Dean's Team Science Award - \$10,000 grant for collaborative science - ISMMS
- (2025) Mount Sinai Health System STAR Recognition - ISMMS
- (2023) Trainee Research Excellence Award - top 60 abstracts out of 5000 - American Society of Human Genetics
- (2020) Rhodes Scholarship local finalist, University of Chicago
- (2020) Howell Murray Alumni Association Award - 15 recipients out of 1800 fourth year students - University of Chicago
- (2020) Stanek Prize for Undergraduate Excellence - 2 recipients out of 1800 fourth year students - University of Chicago
- (2019) National ABRCMS Conference Travel Award
- (2019) Reviewers' Choice Abstract, American Society of Human Genetics
- (2018) National SACNAS Conference Travel Award
- (2017) College Outstanding New Leader - 2 recipients out of 1800 first year students - University of Chicago
- (2018 – 2020) Hispanic Scholarship Fund Scholar
- (2016 – 2020) Questbridge National Match Scholarship - Full ride 4 years of undergraduate education

Selected Works in Progress

- **Porras, C.**, Sheu, L., et al. (2025) "Cell-cell interactome dysregulation in neuropsychiatric disease" [manuscript in progress]
- **Porras, C.**, Afreen, R., et al. (2025) "Telepsychiatry Outcomes throughout the COVID-19 Pandemic in a Free Clinic" [manuscript in progress]
- Clarence, T., Masse, N., **Porras, C.**, et al. "A Transcriptomic Roadmap of Parkinson's Disease Progression at Single Cell Resolution" [manuscript in review Nature Genetics]

Selected Conference and Invited Presentations

Lecture

- “Intro to Human Subjects Research and IRB Approval for EHHOP Scientists” medical school course guest lecture in collaboration with Theodore Bania, MD, Associate Dean for Human Subjects Research Protection, ISMMS, Oct., 2024
- “Ethical Considerations for Human Population Genetics Research” undergraduate biology course guest lecture, U of Chicago, June 2019

Oral Presentation

- “Deciphering human brain cellular crosstalk in the context of neuropsychiatric disease” American Society of Human Genetics, Washington D.C., 2023
- “Effective organizing for equitable science,” SACNAS National Conference, Honolulu, HI, 2019
- “Spatial population genetic model for deleterious alleles,” Midstates Math and Science Symposium, Chicago, IL, 2018

Poster Presentation

- “Cell-cell interactome dysregulation in neuropsychiatric and neurodegenerative disease,” American Society of Human Genetics, Denver, CO, 2024
- “The spatial distribution of rare deleterious alleles: implications for study design,” American Society of Human Genetics, Los Angeles, CA, 2022
- “A spatial model for disease allele evolution,” American Society of Human Genetics, Houston, TX, 2019
- “Geographic spread of deleterious alleles,” SACNAS National Conference, San Antonio, TX, 2018
- “Beta-propeller structural conservation,” SACNAS National Conference, Salt Lake City, UT, 2017
- “Gold nanoparticle test for viral infection,” NSF REU Symposium, Miami, FL, 2017

Research Grants

- (2025) Dean’s Team Science Award, ISMMS
- (2020 – 2022) NIH MSTP T32 Fellowship, ISMMS
- (2017 – 2020) Biological Sciences Research Fellowship, University of Chicago

Teaching

- Fall 2025, Introduction to R, ISMMS
- Summer 2025, Ethical and Regulatory Issues in Human Research, Harvard T.H. Chan School of Public Health
- Fall 2024, Clinical Research Education in Genome Science (CREiGS) Short Course, ISMMS
- Fall 2024, Introduction to R, ISMMS

- Summer 2024, Ethical and Regulatory Issues in Human Research, Harvard T.H. Chan School of Public Health
- Fall 2023, Clinical Research Education in Genome Science (CREiGS) Short Course, ISMMS
- Fall 2021, Structures: Medical Anatomy, ISMMS
- Summer 2021, Intro. to Bioinformatics, ISMMS
- Spring 2020, Intro. to Quant. Modeling in Biology, U of Chicago
- Winter 2020, Math Methods for Biological Sciences, U of Chicago
- Fall 2019, Math Methods for Biological Sciences, U of Chicago
- Summer 2019, Genetics: Diseases and Ethical Implications, U of Chicago
- Spring 2019, Intro. to Quant. Modeling in Biology, U of Chicago
- Winter 2019, Intro. to Quant. Modeling in Biology, U of Chicago
- Summer 2018, Genetics: Diseases and Ethical Implications, U of Chicago
- Spring 2018, Intro. to Quant. Modeling in Biology, U of Chicago

Leadership

- (January 2025 – Present) Chief Research Director, East Harlem Health Outreach Partnership
 - Oversee clinic research. Manage communications with IRB. Ensure IRB compliance.
 - Design protocol, standard operating procedures and obtain IRB approval for one of the largest electronic health record databases in free clinics: EHHOP CHARTS
- (February 2024 – January 2025) Director, Mental Health Clinic research, East Harlem Health Outreach Partnership
 - Lead clinical research for mental healthcare IRB approval and publication
- (March 2022 – Present) Senior Clinician, East Harlem Health Outreach Partnership
 - Manage primary care for uninsured patients with chronic conditions under physician supervision
- (August 2021 – Present) Career Mentor, Leadership Enterprise for a Diverse America
 - Advise over 200 undergraduate students in the LEDA network with healthcare career planning
- (March 2021 – April 2022) Co-Leader of Medicina en Español New York, NY
 - Led Medical Spanish course logistics for 50 graduate and medical students
- (June 2019 – June 2021) Founder of Computational STEM Lab Chicago, IL
 - Led educational nonprofit introducing underrepresented high school students to Python coding served 100+ students in Chicago and New York with Center for Excellence in Youth Education
- (February 2017 - June 2020) President and Founder of UChicago SACNAS Chicago, IL
 - Supported 500+ SACNAS scientists and raise \$25,000+ for 3 annual research conferences

Memberships

- American Society of Human Genetics (ASHG)
- Society for the Advancement of Chicanos/Hispanics and Native Americans in STEM (SACNAS)