RICARDO LINARES SALDANA

Aspiring pathologist dedicated to advancing patient care through the integration of genomics.

A physician-scientist with extensive training in genetics, epigenetics, and computational genomics. My research has evolved from wet-bench discovery to leading complex, large-scale sequencing analyses, providing me with a unique perspective on disease mechanisms. I am eager to apply this analytical and problem-solving skill set to the challenges of diagnostic pathology, with the ultimate goal of pursuing a fellowship in molecular pathology and contributing to the advancement of personalized medicine.

EDUCATION

2023 | 2014
MD, Medicine
Perelman School of Medicine
Philadelphia, PA

2021 | 2016
PhD, Genetics and Epigenetics
University of Pennsylvania
Philadelphia, PA

2012
BS, Molecualr and Cellular Biology
The Johns Hopkins Universitry
Baltimore, MD

RESEARCH EXPERIENCE

Current | 2023
Postdoctoral Research Fellow
Perelman School of Medicine
Philadelphia, PA
- Developed computational pipelines analyzing NGS data to investigate chromatin architecture and disease-relevant gene regulation.

2021
Doctoral Student
University of Pennsylvania
Philadelphia, PA
- Principal Investigator: Rajan Jain, MD
- Co-Mentor: Jonathan A. Epstein, MD

2015
Undergraduate Researcher
The Johns Hopkins University
Baltimore, MD
- Principal Investigator: Haig Kazazian, MD

2015
Undergraduate Researcher
University of Pennsylvania
Philadelphia, PA
- Principal Investigator: Michael Marks, PhD

2014
Postbaccalaureate Research Fellow
National Institutes of Health
Bethesda, MD
- Principal Investigator: William Gahl, MD, PhD
- Co-Mentor: Camilo Toro, MD

CONTACT

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CODING SKILLS

- Shell/Bash
- NGS Data Analysis
- High Performance Computing
- R (Bioconductor, ggplot2, DESeq2)
- Python
- Containerization (Docker)
- Databases

LANGUAGES

English, fluent
Spanish, native

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Last updated on 2025-08-25.

PUBLICATIONS

2025 **Transcription and Cohesin Direct Domain Boundary Spatial Positioning and Underpin Friedreich's Ataxia**
Cell, In Revision,
• Ashley Karnay, Ricardo Linares-Saldana, Qiaohong Wang, et al

2025 **Mechanistic and Epigenetic Partitioning of Lamina-Associated Chromatin Revealed by a Genome-Wide Imaging Screen**
bioRxiv, 10.1101/2025.08.13.670143
• Patrick J. Walsh, Elizabeth B. Kraeutler, Ricardo Linares-Saldana, et al

2025 **Genome folding and nuclear speckles converge to orchestrate fibroblast activation**
In Preparation,
• Zachary Gardner, Ricardo Linares-Saldana, Krishna K. Haridhasapavalan, et al

2025 **Mesenchyme directed cytoskeletal-nuclear coupling regulates tissue regeneration**
In Preparation,
• Dakota L. Jones, Sarah E. Schaefer, Ricardo Linares-Saldana, et al

2024 **A genome-wide CRISPR screen identifies BRD4 as a regulator of cardiomyocyte differentiation**
Nature Cardiovascular Research, 10.1038/s44161-024-00431-1
• Arun Padmanabhan, ... Ricardo Linares-Saldana, ... Rajan Jain

2021 **BRD4 orchestrates genome folding to promote neural crest differentiation**
Nature Genetics, 10.1038/s41588-021-00934-8
• Ricardo Linares-Saldana, Wonho Kim, Nikhita A. Bolar, et al

2021 **Responsiveness to perturbations is a hallmark of transcription factors that maintain cell identity in vitro**
Cell Systems, 10.1016/j.cels.2021.07.003
• Ian A. Mellis, ... Ricardo Linares-Saldana, ... Arjun Raj

2021 **A transcriptional switch governs fibroblast activation in heart disease**
Nature, 10.1038/s41586-021-03674-1
• Michael Alexanian, ... Ricardo Linares-Saldana, ... Deepak Srivastava

2021 **Pathogenic LMNA variants disrupt cardiac lamina-chromatin interactions and de-repress alternative fate genes**
Cell Stem Cell, 10.1016/j.stem.2020.12.016
• Parisha P. Shah, ... Ricardo Linares-Saldana, ... Rajan Jain

2020 **BRD4 (Bromodomain-Containing Protein 4) Interacts with GATA4 (GATA Binding Protein 4) to Govern Mitochondrial Homeostasis in Adult Cardiomyocytes**
Circulation, 10/gh59dw
• Arun Padmanabhan, Michael Alex, Ricardo Linares-Saldana, et al

2020 **Identification of a molecular basis for the juvenile sleep state**
eLife, 10.7554/eLife.52676
• Leela C. Dilley, ... Ricardo Linares-Saldana, ... Matthew S Kayser

2019 **Targeting cardiac fibrosis with engineered T cells**
Nature, 10/gf73rc
• Haig Aghajanian, ... Ricardo Linares-Saldana, ... Jonathan A. Epstein

2019 **Early lineage specification defines alveolar epithelial ontogeny in the murine lung**
Proceedings of the National Academy of Sciences, 10/gfxfcq
• David B. Frank, ... Ricardo Linares-Saldana, ... Edward E. Morrisey

2017 **Centromere inheritance through the germline**
Chromosoma, 10.1007/s00412-017-0640-y
• Arunika Das, Evan M. Smoak, Ricardo Linares-Saldana, et al

2016 **BLOC-1 Brings Together the Actin and Microtubule Cytoskeletons to Generate Recycling Endosomes**
Current Biology, 10.1016/j.cub.2015.11.020
• Cédric Delevoye, ... Ricardo Linares-Saldana, ... Graça Raposo

AWARDS

2022 | 2019 **NRSA F31 Grant Award**
National Institutes of Health

2021 | 2017 **Research Fellowship**
The Center for Engineering MechanoBiology at UPenn

2018 | 2017 **Research Travel Awards**
Society for Advancement of Chicanos/Hispanics and Native Americans in Science, Graduate and Professional Student Assembly, and Biomedical Graduate Studies at UPenn