PATRICIO PEREZ-HENRIQUEZ

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Google scholar

RESEARCH EXPERIENCE

Assistant Project Scientist, UCLA — Jul 2024 - Jan 2026
Supervisor: Jaimie Van Norman

Assistant Project Scientist, UC Riverside — Apr 2021- Jun 2024
Supervisor: Zhenbiao Yang and Jaimie Van Norman

Postdoctoral Researcher, UC Riverside — Apr 2016 - Apr 2021
Supervisor: Zhenbiao Yang

EDUCATION

Ph.D. in Molecular, Cellular and Neuroscience Biology — Jan 2016
"Lateral root development; response to Sortin2"
Thesis Advisor: Lorena Norambuena (UChile) and Tom Beeckman (VIB, UGhent)
University of Chile, Chile

Exchange doctoral student — Apr - Oct 2013
VIB and Ghent University, Belgium

MSc, Molecular and Cellular Biology — Dec 2010
University of Chile, Chile

BSc Molecular Biotechnology Engineering — Jan 2009
University of Chile, Chile

Exchange undergraduate student — Jan - Jun 2008
UC Davis, California, USA

GRANTS, FELLOWSHIPS AND AWARDS

Grants

Responsible researcher. Valorization of University Research. — 2012-2013
FONDEF-VIU, CONICYT, Chile. ~30,000 USD.

Responsible researcher. Operational expenses for doctoral thesis development. — 2013-2014
CONICYT, Chile. ~8,000 USD.

Co-responsible researcher. Foreign specialists visit. Prof Dr. Tom Beeckman. — 2011
MECESUP, Chile. ~4,000 USD.

Fellowship

Postdoctoral Fellowship. Salary and benefits as postdoctoral scholar — 2017-2019
FAFU-UCR Joint Center. ~120,000 USD Total (60.000 USD /year)

Ph.D. Fellowship. University fees and monthly stipend — 2011-2015
CONICYT-Chile. ~80,000 (16,000 USD / year).

Research Internship. Research internship abroad at UGhent/VIB — 2012
University of Chile - Student affairs office. ~4,500 USD.

Awards

Travel Award, supported by NSF — 2025
Conference IPGSA 2025, Fort Collins, Colorado

Best Oral Presentation at the UCR Early Career Scientist Symposium 2024
Graduate Division and RPA, UC Riverside

Nominee to Excellence in Postdoctoral Research Award 2024
Office of Research and the Graduate Division, UC Riverside

Nominee to Diversity, Equity, and Inclusivity Award 2023
Department of Botany and Plant Science, UC Riverside

Exchange student scholarship. Studies abroad at UC Davis 2008
University of Chile - Student Abroad Program. ~19,000 US

TEACHING EXPERIENCE

Instructor. Freshman academic advising seminar NASC093 Sep - Dec 2021
UC Riverside, USA

Invited lecturer.
"The root of success; molecular aspects of lateral root development". Oct 2012
Course of 'Plant biotechnology' for undergraduates in molecular biotechnology major. and Oct 2013
University of Chile. Santiago, Chile.

Mentor, training students from high school to graduate students 2011- present
Aditi Patel, Jaclyn Shoudis, Nicole Ray, Daniel Sert, Nate Collins, Destiny Tran, Kishan Talati, Diya Paul, Stefania Morales and Claudio Osorio.

PUBLICATIONS

Pérez-Henríquez P†, Toth J †, Rodriguez-Furlán C, De la Torre R, Wright D, Marks H, Balandin A, Van Norman J (2025). WALLFLOWER, an Arabidopsis receptor-like kinase, is polarized in root epidermal cells where it represses cell elongation impacting root waving. doi.org/10.1101/2025.07.15.664984. *bioRxiv*. Under review at *The Plant Cell*. † Equal contribution.

Pérez-Henríquez P, Nagawa S, Michniewicz M, Tang W, Pan X, Rasmussen C, Cui X, Van Norman J. Strader L & Yang Z (2025) PIN2-mediated self-organizing transient auxin flow contributes to auxin maxima at the tip of Arabidopsis cotyledons. doi.org/10.1038/s41467-024-55480-8. *Nature Communications*.

Pérez-Henríquez P, Li H, Zhou X, Pan X, Lin W, Tang W, Nagawa S, Lin D, Xu T, Michniewicz M, Prigge M, Strader L, Estelle M, Hayashi K, Friml J, Qi L, Liu Z, Van Norman J, Yang Z. (2024). Hierarchical global and local auxin signals coordinate cellular interdigitation in *Arabidopsis*. doi.org/10.1101/2024.06.17.599171. *bioRxiv*. Submitted to *Nature Plants*.

Rony I, Campos R, **Pérez-Henríquez P**, Van Norman J (2024). Radial askew endodermal cell divisions reveal IRK functions in division orientation. doi.org/10.1101/2023.03.31.534810v2. *Plant Physiology.*

Yu Y, Tang W, Lin W, Li W, Zhou X, Li Y, Chen R, Zheng R, Qin G, Cao W, **Pérez-Henríquez P**, Huang R, Ma J, Qiu Q, Xu Z, Zou A, Lin J, Jiang L, Xu T, Yang Z. (2023). ABLs and TMKs are co-receptors for extracellular auxin**.** doi.org/10.1016/j.cell.2023.10.017. *Cell*.

Pan X, **Pérez-Henríquez P**, Van Norman J, Yang, Z (2023). Membrane nanodomains; dynamic nanobuilding blocks of polarized cell growth. doi.org/10.1093/plphys/kiad288. *Plant Physiology*.

Morales-Herrera S, Rubilar-Hernandez C, **Pérez-Henríquez P**, Norambuena L (2022) Endocytic trafficking induces lateral root founder cell specification in Arabidopsis thaliana in a process distinct from the auxin-induced pathway. doi.org/10.3389/fpls.2022.1060021. *Frontiers in Plant Science.*

Pérez-Henríquez P., Yang Z. (2022). Extra-nuclear auxin signaling: A new insight into auxin's versatility. doi.org/10.1111/nph.18602. *New Phytologist.*

Aguirre, P., Mena, N.P., Carrasco, C.M., Muñoz, Y., **Pérez-Henríquez, P**., Morales, R., Cassels B. K., Méndez-Gálvez, C., García-Beltrán, O., González-Billault, C., Nuñez, M. T. (2015). Iron chelators and antioxidants regenerate neuritic tree and nigrostriatal fibers of MPP+/MPTP-lesioned dopaminergic neurons. doi.org/10.1371/journal.pone.0144848. *PLoS ONE.*

Rodriguez-Furlán C, **Pérez-Henríquez P**, Norambuena L. (2015). Bioactive Molecules: Translating Chemical and Biological Information from Yeast through Arabidopsis to Crops. doi:10.4172/2161-1009.1000186. *Biochemistry and Analytical Biochemistry.*

Urbina, D., **Pérez-Henríquez, P**., Norambuena, L. (2014). The use of multidrug approach to uncover new players of the endomembrane system trafficking machinery. doi.org/10.1007/978-1-62703-592-7_14. *Methods in Molecular Biology.*

Pérez-Henríquez, P., Raikhel, N. V., Norambuena, L. (2012). Endocytic trafficking towards the vacuole plays a key role in the auxin receptor SCF(TIR)-independent mechanism of lateral root formation in *A. thaliana*. doi.org/10.1093/mp/sss066. Editor's Choice. *Molecular Plant.*

WORKSHOPS AND COURSES

Research mentorship training, CIMER, UCLA Mar 2025
Training in effective research mentorship for future faculty

Course in evidence-based teaching, CIRTL, UCLA Sept-Dec 2024
Introduction course for effective teaching at undergraduate and graduate levels

RNA-seq data analysis workshop, UCR May 2024
Workshop for reproducible research using Jupyter notebooks

Rstudio workshop, UCR Dec 2022
Intro to R and ggplot2

Teaching evaluation workshop, UCR May 2017
Graduate Division at University of California, Riverside, USA.

Patent evaluation training, INAPI, Chile Mar - Jun 2015
Training in patent examination. ~30 h.

Course of entrepreneurship and technological business. Jun-Dec 2010
Innovo, Center for Innovation and Technology. University of Santiago, Chile. ~36h.

Diploma in project preparation and evaluation. Mar - Dec 2010
Department of Industrial Engineering. University of Chile. Santiago, Chile ~156 h.

LICENSES & CERTIFICATIONS

CIRTL Associate Certificate - Teaching Higher Education Jun 2025
The CIRTL Network @ UCLA

INVITED SEMINARS

"PIN2-mediated self-organizing transient auxin flow contributes to the auxin maxima at the tip of the *Arabidopsis* Cotyledon". Jun 2023
Webinar "Development Presents", by the Company of Biologist, UK

"Collaborative auxin signaling for pattern formation in embryonic leaves". Mar 2023
Botany and Plant Sciences Department Seminar, UCR, Riverside, CA, USA

"Hierarchical auxin signaling". Dec 2022
20th CEPCEB Symposium, UCR, Riverside, CA, USA

"Using RNA-seq to identify new genes regulating a developmental process". Oct 2016

Course 'Seminars of plant biology' for undergraduates in plant biology major.
FAFU, Fuzhou, China

"Biotechnology upon the plant root system". Nov 2015
Workshop 'Protecting results in plant biotechnology'
FONDEF, Santiago, Chile.

"A novel molecular mechanism for lateral root formation". Nov 2014
Department of Biology Seminar, University of Chile, Santiago, Chile

PROFESSIONAL SERVICE

Peer reviewing 2022 - present
Plant Physiology, *PNAS*, *The Plant Journal*, *New Phytologist*

Community Reviewer 2024 - present
Frontiers in Plant Science

Board member 2021 - 2025
School governing board at Reach Leadership Academy, Riverside CA, USA

Board member, secretary 2019 - 2020
Riverside Postdoctoral Association (RPA). Riverside, CA, USA

Scientific societies membership
- American association for the advancement of science (AAAS) 2019 - present
- American society of plant biology (ASPB) 2019 - present
- Chilean society of biochemistry and molecular biology (SBBMCh) 2012 - present

COMMUNITY SERVICE

Science and Engineering Fair Judge Jan 2023
Riverside Unified School District, UC Riverside, CA, USA.

Symposium organizer 2018
5th CEPCEB Postdoctoral Symposium, UC Riverside, CA, USA

Seminar "Life in Riverside as Postdoc". Sep 2018
Meet and Greet at UC Riverside, Riverside, CA, USA.

California State Science Fair Judge May 2016
CEPCEB Community Award., Los Angeles, CA, USA.

Seminar "Create, lead, discover and communicate". Nov 2014
Scientific outreach - CONICYT. High school LMS, Santiago, Chile. and Nov 2015

SELECTED PRESENTATIONS AT SCIENTIFIC MEETINGS

-**Pérez-Henríquez P**, Toth J., Van Norman, J. (**2025**). WALLFLOWER, a receptor-like kinase, polarizes in root epidermal cells where it modulates elongation and root waving. IPGSA Conference 2025, Colorado State University, Fort Collins, USA

-**Pérez-Henríquez P**. (**2024**)**.** Polar proteins guide development in leaves and roots**.** Early Career Scientist Symposium. UC Riverside, Riverside, USA.

-**Pérez-Henríquez P**., Nagawa S, Michniewicz M, Tang W, Pan X, Rasmussen C, Strader L, Van Norman J & Yang Z (**2022**) PIN2-mediated self-organizing transient auxin flow globally coordinates pavement cell morphogenesis in *Arabidopsis* cotyledons. Auxin meeting, Cavtat, Croatia.

-**Pérez-Henríquez P.,** Tang W., Rasmussem C., Nagawa S., Strader L., Yang Z. (**2018**) Self-promoted and self-terminated PIN2-mediated auxin transport is crucial during coordination of pavement cell morphogenesis. CEPCEB Postdoctoral Symposium. Riverside, CA, USA.

-**Pérez-Henríquez P**., Parizot B., Chen Q., Beeckman T., Norambuena L. (**2014**). Genome-wide transcript profiling to uncover new genes in the SCF-TIR1/AFBs-independent pathway of lateral root formation in *A. thaliana*. Annual Meeting of the Society for Biochemistry and Molecular Biology of Chile. Puerto Varas, Chile

-**Pérez-Henríquez P**., Aguirre P., Gómez F., Gonzalez C., Nuñez N.T. (**2011**). Iron chelators reverse MPP+-induced neurodegeneration in dopaminergic neurons in vitro. International symposium for iron and copper homeostasis, Pucón, Chile.

-**Pérez-Henríquez P**., Norambuena L. (**2010**). The compound Sortin2 mode of action is unique disrupting *Arabidopsis thaliana* endomembrane system. V Annual Meeting of Plant Biology. Olmué, Chile.

REFERENCES

Zhenbiao Yang
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Emeritus Professor - UCR
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