

JAIME CORDOVA

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EDUCATION

- Genetics, Ph.D.** 2018 - Present
University of Wisconsin, Madison, 425 Henry Mall, Madison, WI 53706
- Biology - Option in Molecular Cell Biology and Physiology, B.S.** 2016 - 2018
California State University, Long Beach, 1250 Bellflower Blvd. Long Beach, California 90840
- Biology, A.A. and Chemistry, A.A.** 2012 - 2016
Cerritos College, 11110 Alondra Blvd. Norwalk, California 90650

RESEARCH EXPERIENCE

- Graduate Student – Genetics, Ph.D.** September 2018 - Present
Sponsored by: National Institutes of Health T32 Training Grant
University of Wisconsin, Madison, Madison, Wisconsin
Conducting research in the Perna Lab as part of the Laboratory of Genetics and Genome Center of Wisconsin. The focus of my research is investigating the evolution of the response to oxygen availability in facultative anaerobes.
- Undergraduate Researcher – RISE Program** June 2016 – August 2018
Sponsored by: CSULB RISE Program
California State University, Long Beach, Long Beach, California
Conducting research in the Brusslan Laboratory in the Department of Biological Sciences. The focus of my project is investigating the function of defense-related signaling genes up-regulated in leaf senescence, the developmental stage when older leaves recycle their nutrients before organ death.
- Undergraduate Researcher – Roberts Summer Student Academy** June 2017 – August 2017
Sponsored by: National Cancer Institute CURE Program
Beckman Research Institute, City of Hope, Duarte, California
Conducting research in the Schones Laboratory in the Department of Diabetes Complications and Metabolism. The focus of my project is characterizing the role that the PI3K/Akt/mTOR pathway has on triple negative breast cancer cells in a hyperinsulinemic state. This work was conducted via the inhibition of several portions of the pathway and observing the downstream effects, including nuclear histone acetylation levels.
- Undergraduate Researcher – Roberts Summer Student Academy** June 2015 – August 2015
Sponsored by: National Cancer Institute CURE Program
Beckman Research Institute, City of Hope, Duarte, California
Conducting research in the Weitzel Laboratory in the Division of Clinical Cancer Genetics of the Department of Population Sciences. My project aimed to determine if genetic cancer risk assessment, or genetic counseling, could affect patients' anxiety levels. The project was a retrospective study using data from a five-year investigation on the motivations for patients to attend their genetic counseling appointment. Overall, participants demonstrated a decrease in anxiety levels after learning about basic cancer genetics.

Undergraduate Researcher – Bridges to Baccalaureate Program

June 2014 – August 2014

Sponsored by: UCI Minority Science Program

University of California, Irvine, Irvine, California

Conducting research in the Mota-Bravo Laboratory in the School of Biological Sciences. My project aimed to establish an antibiotic resistance profile of bacteria present in the aquatic environments of Orange County.

PRESENTATIONS AND PUBLICATIONS

Oxygen-Regulated Gene Families Evolve via Speciation and Transfer Events July 2020

Cordova, J., Hasley, A.O., Neeno-Eckwall, E.C., Glasner, J.D., Perna, N.T.

Abstract accepted for presentation at 2020 Conference of the Society for Molecular Biology and Evolution, Québec City, Québec, Canada. **Conference cancelled due to COVID-19 pandemic.**

Determining Evolutionary Modes Of Bacterial Oxygen-regulated Gene Families June 2020

Cordova, J., Hasley, A.O., Neeno-Eckwall, E.C., Glasner, J.D., Perna, N.T.

Abstract accepted for presentation at ASM Microbe 2020, Chicago, Illinois. **Conference cancelled due to COVID-19 pandemic.**

Investigating the Viability of Microorganisms in a Venus Cloud Analog October 2019

Cordova, J.

Presented at the 2019 Venera-D Landing Sites selection and Cloud Layer Habitability Workshop, Space Research Institute of the Russian Academy of Sciences, Moscow, Russia

The HAC1 histone acetyltransferase promotes leaf senescence and regulates expression of ERF022 August 2019

Hinckley, W. E., Keymanesh, K., **Cordova, J.**, Brusslan, J.A.

Published in *Plant Direct*

Multiple Modes of Evolution in Bacterial Oxygen-Regulated Gene Families August 2019

Cordova, J., Hasley, A.O., Neeno-Eckwall, E.C., Glasner, J.D., Perna, N.T.

Poster presented at the 2019 Molecular Genetics of Bacteria and Phages Meeting, Madison, Wisconsin

The HAC1 Histone Acetyltransferase Promotes Leaf Senescence via Regulation of ERF022 July 2018

Cordova, J., Hinckley, W. E., Keymanesh, K., Brusslan, J.A.

Poster presented at the 2018 Plant Biology Conference, Montréal, Canada.

Type 2 Diabetes and PI3K/Akt/mTOR: a potential role in Triple Negative Breast Cancer

Cordova, J., Senapati, P., and Schones, D. E.

Poster presented at the 2017 SACNAS National Conference, Salt Lake City, Utah.

October 2017

Poster presented at the 2017 Eugene and Ruth Roberts Summer Student Academy Poster Session of City of Hope, Duarte, California.

July 2017

Presented as part of the student speaker series for the Eugene and Ruth Roberts Summer Student Academy of City of Hope, Duarte, California.

July 2017

- Histone Acetylation Contributes to the Regulation of Developmental Leaf Senescence in Arabidopsis** June 2017
 Keymanesh, K., Rus-Canterbury, A. M., Hinckley, W. E., **Cordova, J.**, and Brusslan, J.A.
 Poster presented at the 2017 Plant Biology Conference, Honolulu, Hawaii. Presented by Brusslan, J.A.
- The Role of Receptor Like Proteins RLP28 and RLP35 in Leaf Senescence of *Arabidopsis thaliana*.**
 Cordova, J. and Brusslan, J.A.
 Poster presented at the 2016 SACNAS National Conference, Long Beach, California. October 2016
- Poster presented at the 2016 College of Natural Science and Mathematics Student Symposium, California State University, Long Beach, Long Beach, California. September 2016
- Genetic Cancer Risk Assessment and Cancer Genetics Knowledge: Serving to Decrease Patient Anxiety?**
 Cordova, J., Chavez, T., Yang, K., Blazer, K. R., Nehoray, B., Sand, S., Weitzel, J. N.
 Oral presentation at the 2016 National Conference on Undergraduate Research, University of North Carolina at Asheville, Asheville, North Carolina. April 2016
- Poster presented at the 15th Annual Biomedical Research Conference for Minority Students, Seattle, Washington. November 2015
- Poster presented at the 2015 Southern California Conference for Undergraduate Research, Claremont, California. November 2015
- Will They Relax? Genetic Cancer Risk Assessment, Cancer Genetics Knowledge, and Their Role in Patient Anxiety.**
 Cordova, J., Chavez, T., Yang, K., Blazer, K. R., Nehoray, B., Sand, S., Weitzel, J. N.
 Presented at the 2015 STEM Open House Poster Session, Cerritos College, Norwalk, California. September 2015
- Poster presented at the 2015 Eugene and Ruth Roberts Summer Student Academy Poster Session of City of Hope, Duarte, California. July 2015
- Providencia rettgeri* From Aquatic Environments Resistant to Fosfomycin and Chloramphenicol.**
 Cordova, J. and Mota-Bravo, L.
 Presented at the 2014 STEM Open House, Cerritos College, Norwalk, California. September 2014

FELLOWSHIPS UNDER REVIEW

HHMI Gilliam Fellowship for Advanced Study

“Elucidating the regulatory response of facultative anaerobes to variable oxygen availability”

Wisconsin Space Grant Consortium Dr. Laurel Salton Clark Memorial Research Fellowship

“Investigating the Viability of Microorganisms in a Venus Cloud Analog”

Wisconsin Space Grant Consortium Graduate & Professional Research Fellowship

“Investigating the Viability of Microorganisms in a Venus Cloud Analog”

AWARDS AND HONORS

NSF Graduate Research Fellowship Program – Honorable Mention “Elucidating the regulatory response of facultative anaerobes to variable oxygen availability” <i>University of Wisconsin, Madison</i>	March 2020
Stone Travel Award Recipient <i>University of Wisconsin, Madison</i>	July 2019
University President’s Honor List <i>California State University, Long Beach</i>	July 2018
University President’s Honor List <i>California State University, Long Beach</i>	July 2017
SACNAS Student Travel Award <i>Society for Advancement of Chicanos and Native Americans in Science</i>	June 2017
National Cancer Institute CURE Program Participant <i>City of Hope</i>	June 2017
SACNAS Student Travel Award <i>Society for Advancement of Chicanos and Native Americans in Science</i>	August 2016
The President’s Volunteer Service Award <i>California Science Center</i>	June 2016
Research Initiative for Scientific Enhancement (RISE) Participant <i>California State University, Long Beach</i>	June 2016
ABRCMS Student Travel Award <i>American Society for Microbiology</i>	October 2015
National Cancer Institute CURE Program Participant <i>City of Hope</i>	June 2015
The President’s Volunteer Service Award <i>California Science Center</i>	July 2014
Bridges to Baccalaureate Program <i>University of California, Irvine</i>	June 2014
Dean’s List <i>Cerritos College</i>	Fall 2013

SOCIETY MEMBERSHIPS

Society for Advancement of Chicanos and Native Americans in Science (SACNAS)

Society for Molecular Biology and Evolution

American Society for Microbiology

WORKSHOPS, ACTIVITIES AND SCIENCE OUTREACH

Origins of Life, Artificial Life and Astrobiology (OoLALA) at UW-Madison Contributor <i>University of Wisconsin, Madison</i> OoLALA at UW-Madison is an interdisciplinary research community seeking to answer questions related to the origins of life, artificial life and astrobiology. In addition to being a part of this community as a researcher, I direct the community’s social media efforts and contribute to the community’s website.	March 2019 - Present
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NASA/Jet Propulsion Laboratory Solar System Ambassador Volunteer January 2019 - Present
Solar System Ambassadors volunteer to take part in NASA's Jet Propulsion Laboratory's public engagement effort to communicate the science and excitement of NASA's space exploration missions and scientific discoveries.

Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Chapter President January 2019 - Present
University of Wisconsin, Madison
The goal of the UW-Madison SACNAS Chapter is to support and increase the number of underrepresented people in the sciences. The chapter works towards this goal through outreach, professional development and networking opportunities.

Museum Guide March 2016 - Present
Griffith Observatory, Los Angeles, California
Interpret astronomical information to guests of the Observatory and respond to questions. I also explain exhibits related to sky observing, astronomy and related sciences. I research various space and astronomy related topics, and maintain up to date on related current events in preparation for questions from individual guests and for presentations to larger audiences.

Participant – Workshop in Molecular Evolution May 2020
Accepted to participate in the Marine Biological Laboratory's (aka Woods Hole) Workshop on Molecular Evolution. This workshop allows students to work closely with scientists to receive in depth instruction on molecular evolution, evolutionary genomics, advanced training in statistical methods, and hands on experience with software tools. **Workshop cancelled due to COVID-19 pandemic.**

Air and Space Volunteer August 2013 – Aug. 2018
California Science Center, Los Angeles, California
Provide information to guests regarding the Space Shuttle *Endeavour* and related topics of space exploration.

Participant – NASA Social: InSight Launch May 2018
Participated in the NASA Social for the launch of the InSight Lander to Mars. This experience involved learning about the mission and the launch profile, and sharing the information across social media. I shared this information through my social media platforms, along with sharing this information at the California Science Center and Griffith Observatory.

Invited Presenter – 2018 Night Under the Stars: “Cooking Up A Comet with the Ingredients for Life” February 2018
Hosted by Sally Ride Elementary School in Los Angeles. Presented to several groups of elementary school students and their parents, on the make-up of comets and how they are carriers of the ingredients for life.

May 2017

Invited Presenter – “Science Extravaganza”

Hosted by Latinos in Science and Engineering at California State University, Long Beach. A STEM promotion to middle school students from the Los Angeles County and Orange County areas. Presented my research from the Bruslan Laboratory.

Student Mentor – STEM Career Day

March 2017

Hosted by the California Science Center’s Education Department. Spoke to high school students in the Community Teen Intern Program about education in STEM and research opportunities.

Invited Presenter – 2017 Night Under the Stars: “Cooking Up A Comet with the Ingredients for Life”

January 2017

Hosted by Sally Ride Elementary School in Los Angeles. Presented to several groups of elementary school students and their parents, on the make-up of comets and how they are carriers of the ingredients for life.

Invited Presenter – 2016 Night Under the Stars: “Pluto and New Horizons: Beyond the Planets”

February 2016

Hosted by Sally Ride Elementary School in Los Angeles. Presented to several groups of elementary school students and their parents, on Pluto and the discoveries provided by the *New Horizons* spacecraft during its flyby the previous year.

Student Panelist – 9th Annual High School Counselor Conference

December 2015

Hosted by Cerritos College. Represented the Cerritos College Scholars’ Honors Program and the Department of Science, Engineering and Mathematics. The panelists spoke to counselors about the opportunities and services available to prospective students within their respective departments.

Invited Presenter – 2015 Night Under The Stars: “What’s Next for Spaceflight? Orion and the Space Launch System”

February 2015

Hosted by Sally Ride Elementary School in Los Angeles. Presented to several groups of elementary school students and their parents on NASA’s space shuttle replacement, the Orion capsule and the Space Launch System, and its goals.

Society for Advancement of Chicanos and Native Americans in Science (SACNAS) Chapter

August 2015 – May 2016

Cerritos College, Norwalk, California

Founder and President of SACNAS Chapter at Cerritos College. The chapter hosted speakers for students and participated in several science outreach events.

Scholars’ Honors Program

August 2012 – May 2016

Cerritos College, Norwalk, California

The Scholars’ Honors Program is a transfer-oriented program for Cerritos College students, where students are required to maintain a minimum 3.0 GPA and participate in five honors courses. With this program’s support, I presented my 2015 City of Hope research at the National Conference for Undergraduate Research.