

Katarina Aranguiz

CONTACT INFORMATION

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EDUCATION

University of Wisconsin, Madison | September 2022 – Present

- Major: Biochemistry
- Certificate: Data Science
- GPA: 3.91

University of California, Los Angeles | September 2021 – June 2022

- Major: Biochemistry
- GPA: 3.97

Hartford Union High School, Hartford, WI | August 2016 – June 2020

HONORS AND AWARDS

- Barry Goldwater Scholar (Spring 2024)
 - Hilldale Undergraduate Research Fellowship (Spring 2024)
 - Biochemistry Undergraduate Summer Research Award (Spring 2024)
 - UW Madison Dean's List (Fall 2022, Spring 2023, & Spring 2024)
 - William F. Vilas Scholarship (2023)
 - Sophomore Research Fellowship (2023)
 - HHMI-Pathways Scholar – Howard Hughes Medical Institute at UCLA (2022)
 - UCLA Dean's List (Fall, Winter, & Spring 2022)
 - Hispanic Scholarship Foundation Scholar (2021)
 - Hartford Union High School Scholarship Foundation recipient (2021)
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UNDERGRADUATE RESEARCH EXPERIENCE

Department of Genetics, University of Wisconsin, Madison, Sept 2022 – Present (Principal Investigator: Dr. Chris Todd Hittinger).

- Characterization of *AOX* in *Yarrowia lipolytica* and its role in oxidative stress resistance
- Applied a machine learning model to identify genetic mechanisms of oxidative stress resistance across diverse yeast species
- Streamlined and led a tutorial on a coupled method of wet-lab data collection and ML implementation for WEI colleagues

Department of Molecular, Cell, and Developmental Biology, University of California, Los Angeles, September 2021 – June 2022 (Principal Investigator: Dr. Tracy Johnson)

- Characterization of Prp16p, a pre-mRNA splicing factor
 - Collaborated with a team of undergraduates to determine the molecular mechanism of genetic suppression in *Saccharomyces cerevisiae* mutant strain to reveal novel functions of Prp16p
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ORAL PRESENTATIONS

- “Applying machine learning to uncover the genetic basis of resistance to reactive oxygen species across diverse yeast species.” Presented at GLBRC Bioinformatics Community of Practice, Madison, WI, January 2024
- “ML Workshop: Applications in Genetics.” Presented at the Wisconsin Energy Institute’s lab meeting, Madison, WI, January 2024
- “Reactive oxygen species across the yeast subphylum.” Presented at the Wisconsin Energy Institute’s fourth floor lab meeting, Madison, WI, May 2023
- “Machine learning model identifies genetic mechanisms of oxidative stress resistance across diverse yeast species.” Oral presentation at y1000+ research group. Virtual meeting, Madison, WI, September 2023
- “The role of YIL092W in the suppression of temperature sensitivity.” Presented at the HHMI-Pathways End-of-Year Symposium, Los Angeles, CA, June 2021
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POSTER PRESENTATIONS

- Aranguiz K, Elkin L, Wolters JF, Horianopoulos L, Hittinger C. (2023). Genetic factors contributing to ROS resistance and their implications in yeast cell factories. Poster presented at the GLBRC Annual Science Meeting, Lake Geneva, WI, May 2023.
- Aranguiz K, Horianopoulos L, Elkin L, Segura Abá K, Shiu S, Rokas A, Hittinger C. (2024). Optimizing a machine learning model to identify gene families predictive of oxidative stress resistance across the Saccharomycotina subphylum. Poster presented at the GLBRC Annual Science Meeting, Lake Geneva, WI, the Fungal Supergroup’s Undergraduate Symposium, Madison, WI, & UW-Madison’s Undergraduate Research Symposium, Madison, WI in May of 2024.
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TRAINING

- UW Biosafety Training (2023 & 2024)
 - NSF Responsible Conduct of Research Training (2023 & 2024)
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UNIVERSITY AND COMMUNITY SERVICES

CALPIRG Volunteer (UCLA Chapter) | September 2021 – June 2022

- Volunteered for a student-led environmental organization aiming to protect the environment through policymaking and lobbying against California lawmakers on issues such as banning single-use plastics and implementing green transportation in LA county

Data Science Hub member | September 2022 – Present

- Attend seminars, workshops, consultations, and regular training sessions to expand upon my computational abilities and share my work with others

WEI Undergraduate Journal Club member | September 2022 – Present

- Discuss and critically analyze academic papers related to genetics, molecular biology, biochemistry, ecology, and evolution with undergraduate researchers at the WEI