Directory Notes

Originally Published April 2022

Photos: Sharon (Wan-Hsuan) Lin conducting lab work (Cover Page), 3D model of two cell lines’ male X chromosome submitted by Jiang Zichen (p. 5), Rachel Luu (p. 7), Malia Henry, Jeffrey Xing, Noura, Mohamed, Kaitlin Clemmer, Sapra Mehta, & Minh Le (p. 15), Jacob Ayers shows an example of an Audiomoth in its case. Ten of these devices were spread out over the Scripps Coastal Reserve to record various species, such as the endangered California Gnatcatcher (p. 20), Jair Cortes clamming for samples (p. 41), Cindy Tran and Hank Baker (PhD candidate) electrofishing for Tui Chub samples at Mammoth Creek (p. 78)

The data in this directory represent information available at the time of publication based on voluntary submissions made by program coordinators and undergraduate students. We know this listing is not comprehensive and we welcome information regarding other undergraduate research programs and student projects from the aforementioned timeframe.

The students listed completed research at any time between September 2020 and August 2021. For students in formal research programs, their research may have started prior and/or extended beyond the dates associated with the directory and/or their program participation. The students may have unlisted accomplishments that occurred or will occur outside the time frame for this year’s directory.
Programs and scholarships identified in this directory were available between September 2020 and August 2021. They may or may not be available in subsequent years. The numbers of students listed for each program are based on 2020-2021 data. Descriptions and logos used are reprinted with permission from the programs. Photos are used with permission from those in them.

Please report any errors to Dr. Marie Sheneman at msheneman@ucsd.edu

Acknowledgements

We would like to acknowledge the invaluable support our program staff have received from Chancellor Pradeep Khosla, Executive Vice Chancellor Elizabeth Simmons, Vice Chancellor of Student Affairs Alysson Satterlund, and Assistant Vice Chancellor for Student Retention and Success Maruth Figueroa. We are grateful that they and our faculty mentors and other partners in promoting undergraduate research maintained the university's commitment to student centered research during this most unusual year.
Once again, our university community celebrates those undergraduates who continued to conduct research in a period of challenge and change. With invaluable guidance and instruction from faculty moderators and dedicated staff, these students not only carried out tasks assigned to them but contributed their insight and creativity, often moving projects forward and assisting in the generation of new knowledge in meaningful ways. Many of them have earned acknowledgements from their mentors by being included in publications or representing their respective labs or other workspaces in conferences professional meeting at UC San Diego and far beyond our campus.

These young scholars deserve to take pride in their achievements. This directory serves in part to broadcast them to our wider community and to place work at the center of the university’s mission.

Additionally, this collective statement also makes clear something the students themselves might not fully appreciate: the degree to which they are redefining what is a research experience. In these listings, you will find students who took a research approach to examining the world inside and outside the traditional academic space, sometimes to disadvantaged communities or to distressed
distressed physical environments. They have also introduced ideas associated with professional and commercial fields into their work. They are campus leaders in reaching across disciplinary lines to find collaborators and mentors.

In 2021, Academic Enrichment Programs, the office that managed many of the programs highlighted here went through an extensive introspective process and emerged as the Undergraduate Research Hub. Our new name reflects our aspiration to be a locus that is student-centered and research-oriented, a valuable resource for students, faculty members, external donors, and other partners. We are grateful for the support we receive from Chancellor Khosla, Executive Vice Chancellor Simmons, Vice Chancellor, Student Affairs Alysson Satterlund, and Assistant Vice Chancellor Student Retention and Success Maruth Figueroa. We remain dedicated to increasing the ways undergraduate research.

Dr. David Artis
Dean of Undergraduate Research Advancement
Table of Contents

- Fast Stats: 7
- Publications and Awards: 8
- Spotlights: 16
- Programs: 23
- Undergraduate Researchers: 44
Undergraduate researchers are listed in this directory

Students gave over 150 conference presentations

Students listed here published a peer-reviewed journal article

Majors represented in this directory

- Biological Sciences (30%)
- Computer Science and Engineering (22%)
- Social Sciences (18%)
- Physical Sciences (16%)
- Arts and Humanities (7%)
- Data Science (3%)
- Health Sciences (2%)
- SIO (1%)
Publications and Awards
Sohan Ghosh

https://doi.org/10.1051/0004-6361/202140300

Hope Leng

https://doi.org/10.1021/acssensors.9b01812

Sapna Mehta

Mehta, S., & Kuo, D. J. (2020). To test or not to test: Genetic cancer predisposition testing in paediatric patients with cancer. *Journal of Medical Ethics, 47*(12).
https://doi.org/10.1136/medethics-2020-106656
Shawn Ogden


Cameron Ormiston


Jerry Wu

Wenqian Yang

https://doi.org/10.1021/acs.jmedchem.1c01151

Emmie Yao

https://doi.org/10.1016/j.biomaterials.2020.120462

https://doi.org/10.1088/1758-5090/ac1992
Award Recipients

Jacob Ayers
- NSF REU Film Competition, 3rd Place

Kartik Choudhary
- NSF Graduate Research Fellowship

Nadia Haghani
- 2020 Society for Advancement of Chicanos/Hispanos and Native Americans National Research Conference, Poster Presentation Award in Life Sciences /Microbiology

Katherine Izhikevich
- Gary C Reynolds Scholarship
Minh Le
- 2021 UC San Diego ACSSA 15th Annual Undergraduate Research Symposium in Chemistry, Outstanding Poster Award
- 2021 SoCal Undergraduate Chemistry Research Symposium, Outstanding Poster Award

Hope Leng
- 2021 NSF Graduate Research Fellowship

Megan Li
- 2020 Undergraduate Space Research Award, Honorary Mention

Rachel Luu
- 2020 Louis Stokes Midwest Regional Center of Excellence Annual Conference, People's Choice Award
Additional Award Recipients

**Bailey Man**
- COVID-19 Data Challenge, 2nd Place Retail & Leisure

**William OFarrill**
- CSU Sally Casanova Pre-Doctoral Award

**Xavier Perez**
- 2021 Koret UC LEADS Research & Leadership Symposium, Top Honors Winner, Engineering & Computer Sciences

**Cameron Ormiston**
- NIH Postbaccalaureate Intramural Research Training Award
- 2021 NIH Academy Enrichment Program Scholar

**Eleanor Quirk**
- Summer 2021 The Future of Chemistry Scholarship for Women
Award Recipients

Ruby Rios Ramirez
- 2020 Society for Advancement of Chicanos/Hispanos and Native Americans in Science Research Conference, Travel Award

Elanor Sievers
- 2021 SoCal Undergraduate Research Symposium, Poster Award
- 2021 UC San Diego ACSSA 15th Annual Undergraduate Research Symposium in Chemistry, Poster & Video Awards

Wenqian Yang
- Chemistry and Biochemistry Department, Library Award
Currently, there are no school-wide, virtual orientations that spotlight diverse communities at our university. As a result, many students and faculty are unaware of the various identities and backgrounds their counterparts hold. I decided to get involved in undergraduate research to analyze the impacts of a “cultural awareness” orientation module on higher education. The main goals of my research project were to: (1) Positively spotlight minority communities (2) Create a platform for minority alumni voices (3) Provide guidance for incoming students (4) Promote cultural awareness and encourage students to gain greater consciousness of the cultural issues that affect higher education.

During the summer, I was able to conduct various interviews with some of UC San Diego’s Black alum and analyzed various documents on cultural awareness programs implemented throughout the United States. I believe the most interesting thing I was able to undertake was the creation of an artificial intelligence agent for my module. I also utilized various forms of video and audio to create an interactive program. In the future, I plan to conduct research on issues that influence policy, specifically regarding disadvantaged communities. There are various racial inequities found in American public policy, and I would like to develop solutions to housing disparities, education gaps and poverty within the Black community.
I conducted an academic discussion surrounding male homosexual representative media in Japan concentrating on hetero-normative consumerist patterns and reason for consumption and how these ultimately create a deficit in theoretical work analyzing the impact and influence LGBTQ+ media has on the perception of non-hetero-normative relations in society.

The origin of my interest in this topic is from a discussion during a UD class about the “glocalization” of Hello Kitty. The disjointed reaction of her design and her possible political commentary on women’s voices within social spheres made me question politicized bodies within popular media and how other minority groups are represented and affected. I thought upon the global disconnect in both perception and presence of non-hetero-normative bodies in sociopolitical and sociocultural spheres caused by the ever-present systemic oppression and violence of erasure. This train of thought led me to the possible positive and detrimental ideologies residing within the Japanese powerhouse market of male homosexuality and its growing global outreach.

While I began this project focusing on male homosexual representative media, I have expanded my research to include both male and female homosexual representative media. The most exciting part of this research project and its growing size is being able to shine a light on not just male homosexuality but all identities in the spectrums of gender and sexuality research.
Human Biology and Pharmacological Chemistry

Biomolecules sample a range of conformational states to perform their cellular functions and a molecular-level description of these states is necessary to fully understand their biological roles. My project attempts to develop methodologies that allow investigators to probe the dynamic, transient conformational states of molecules by coupling molecular dynamics (MD) simulations with cryo-EM to explore the conformational space sampled by biomolecules of interest and develop cryo-EM data processing strategies.

I initially became interested in my project because it allows me to combine my love for biochemistry with my budding interest in computational science. The interdisciplinary nature of my project lets me use creative strategies to solve long-standing questions in the sciences. Furthermore, I’m enheartened that my work on this project and my other projects can lead to significant contributions to the fields of medicine and pharmacology.

My current experience in research allows me to gain critical laboratory skills while allowing me to broaden my horizons. Although I can’t tell you whether I’ll have a PhD, MD/DO, a PharmD, or some combination of the above, I know that in 10 years I’ll be just as curious about the world as I am now.
Sapna Mehta

Global Health

[My study] is researching the knowledge, attitudes and factors associated with pediatric oncology genetic cancer predisposition testing. We survey patients and families as they go through genetic counseling and testing to see if their cancer is genetically predisposed.

When I was conducting research, I did not realize that it would be so helpful to my future goals. I pivoted my career path from pre-medicine towards the business side of healthcare including biopharmaceutical product and market strategy. When I first switched into this field, my research experience helped me understand the inner workings of clinical trials which helped me get my foot in the door and contribute at a biotechnology company within the clinical development/operations side. This helped me understand what it takes to make a biopharmaceutical product including all of the clinical trials involved before.

My research set a perfect foundation for me as I was intimately involved with the research for one project to understand how it can work on a larger scale with data analysis, logistics, IRB approval, site/patient collecting, etc. As a current healthcare consultant, that ground-level experience definitely set me up for success.
Broadly, my research interest centers around understanding the aesthetic sensibilities of non-human animals. My work specifically focuses on how songbirds construct their vocalizations (birdsongs) to attract mates, and if the aesthetic value within their vocalizations can be decoded with theories rooted in how human music attracts its listeners. I conduct my research mostly by computational analyses of birdsong recordings, and I am gradually expanding to working with birds in behavioral experiments.

My interest in research began with my experiences in the music department. There, I was exposed to experimental music that played around with its listener's perception, and questioned how we listen, why we listen, and what does it mean to listen. Upon realizing how advances in auditory sciences supported the creation of these interesting music, I knew that I wanted to be part of the science that inspires the arts, and hence I sought out opportunities to do so in the psychology department. ... my now P.I. recommended me on a project in uncovering the musicality of songbirds, and I was really excited about it because it aligned with my belief that there is beauty in everything and not just in what can be traditionally conceived as art, and I wanted to communicate that through my work. As I started to take charge of the project, I infused more of my artistic sensibilities into it, and now it has evolved into an exploration on what beauty means to animals other than ourselves.
Growing up in the Middle East, I was obsessed with this horror series by an Egyptian author. It was my first book to read, at least the first one not produced by Disney, and with no pictures in it. The main character (and the real author) was a physician who also taught at the school of medicine, Cairo University. So he used to pepper his stories with so many interesting facts about science, scientists, and the human body. I became so fascinated to the point where I could no longer picture any version of my future that didn’t involve science.

My project at Schöneberg Lab focuses on epilepsy. Those with drug-resistant epilepsy are directed to the ketogenic diet, which consists of eating primarily fat and protein, and limiting carb consumption. A single slip in the food regimen renders the patient at a substantially higher risk of having a seizure, seen as a general rise in the number of seizures per day, as well as in seizure severity. Adults, much less children, will find it difficult to adhere to such a rigid lifestyle. My project's purpose is to figure out how β-hydroxybutyrate, the major metabolite in the ketogenic diet, protects against epileptic pathology, such as those caused by mutations in the OPA1 and SCNA1 genes.

The overall project I’m currently working on takes time, maybe years, and I don’t know for a fact that at the end we will be able to help the millions afflicted with epilepsy, but the possibility of doing that is worth it, and in the meantime, I get to do everything in my power to make sure we end up helping them.
Research Programs
The UC San Diego Summer CAMP is a 10-week, full-time research experience for undergraduates, supported by the California Louis Stokes Alliance for Minority Participation in Science, Engineering, and Mathematics grant from the National Science Foundation (NSF). The objective of the program is to provide students with the skills to pursue research careers and to stimulate serious consideration of graduate study.
Creating Scientists to Address Cancer Disparities Program

Creating Scientists to Address Cancer Disparities Program is a National Cancer Institute-funded eight-week summer program run by Dr. Vanessa Malcarne (SDSU) and Dr. Georgia Robins Sadler (UC San Diego). The program teaches students how disparities can influence the outcomes of cancer. Students learned the scientific process in bio-behavioral science labs and a theoretical understanding of the development and sustainment of cancer disparities. Students also gained experience in conducting in-depth analysis of scientific literature and preparing an abstract and poster for national conferences.

16 Students

The Creating Scientists to Address Cancer Disparities Program helped me discover my passion for science. This program helped me discover that I want to pursue a career focused on cancer research.

-Hiela Manely
The UCSD Computer Science and Engineering Early Research Scholars Program (CSE-ERSP) is a team-based research apprentice experience for computer science and engineering majors in their second year of the program. Students learn about research in computer science and then propose and carry out an independent research project over the course of an academic year.

The most valuable part of participating in ERSP was presenting our work at the end of the spring quarter because I was able to show off our year-long research to the class. In addition, being able to see our research on the poster gave me a sense of accomplishment. - Ronaldo Garcia-Hernandez
Students in the ECE Spring/Summer Research Internship Program (ECE SRIP) have the opportunity to observe and participate in the activities of a research group under the supervision of the PI or a member of his/her lab group. The program includes an enrichment component for students consisting of workshops on research communication, research writing, and other pertinent topics.

I learned about Kalman Filters, spectral analysis, python coding, wave dynamics, research papers, and much more! The work I did this summer will greatly help me in my studies and research which will help me to pursue research positions in the future.

-Nicholas Rowlett
Engineers for Exploration (E4E REU) is a one of kind program promoting multidisciplinary and collaborative research projects with the broad goals of protecting the environment, studying wildlife, uncovering mysteries related to cultural heritage, and providing hands-on learning experiences for undergraduate students. We team student engineers with scientists from a wide range of disciplines to create innovative technologies that are deployed around the world.

I improved my leadership skills by banding together a team of peers to construct software that can be used to segment vocalizations of interest from audio recordings. The program also provided me with an opportunity to perform fieldwork in nature, something that I have wanted to do ever since I was a child watching nature documentaries.

-Jacob Ayers

70 Students
The Faculty Mentor Program (FMP) helps students of all majors build valuable relationships with UC San Diego faculty, develop research skills, and envision a future in graduate or professional school. The program is open to students with sophomore, junior, or senior standing, and research is conducted fall, winter, and spring quarters.

82 Students

What I loved about [FMP] is that it not only connected me with my current mentor, but I also got to learn so much about the different fields of research being conducted across campus and how interdisciplinary many topics are.

- Flora Wong
The Genentech Scholars Program is a 10-week full-time summer research program that is a sister program to the UC Scholars Program; the program’s objectives are to provide skills to become research scholars, stimulate students' serious consideration of graduate study, and increase learning and networking opportunities. The Genentech Foundation seeks to support students in life science and technology fields who may have faced barriers to engaging in research in the past.

I've gained a lot of experience in managing my own independent project. I’ve gotten to develop a project proposal, experimental procedures, experimental set-ups MATLAB scripts for data analysis, and figures for papers on my own.
- Khang Hoang
The Halıcıoğlu Data Science Institute Undergraduate Research Scholarship Program awards $2,500 to each student project. The yearlong fellowships focus on providing hands-on training to emerging data science talent. Each researcher works with a mentor to develop analytical skills, data science portfolios, and foster novel data-driven approaches to problem solving. The research program is geared to producing results, with students submitting final reports highlighting accomplishments.

30-60 Students
The UC San Diego MADURA (Mentorship for Advancing Diversity in Undergraduate Research on Aging) Program is funded by the NIH National Institute on Aging. It aims to improve diversity in Aging and Alzheimer’s Disease research and clinical professions, by providing research placements and mentorship for undergraduates from groups who are under-represented in MSTEM studies.

27 Students
The **McNair Program**, named after physicist Dr. Ronald E. McNair, is a federal TRIO program funded by the U.S. Department of Education to provide low-income, first generation college students, and students from groups underrepresented in graduate education, with doctoral study preparation.

I enjoyed my time in the McNair program as I was able to gather experience in working in a research lab. The program helped me strengthen my communication skills and gain an understanding of what it means to do research full time.

- Erick Cervantes
Sponsored by the NSF, the MRSEC REU program provides full-time summer undergraduate research opportunities at the forefront of materials science and engineering. Participants in our highly collaborative and interdisciplinary program, which focuses on predictive assemblies and engineered living materials, will be fully immersed in the research laboratories of any one of our 20 MRSEC faculty as they engage in projects with a focus in either or both experiment and theory.

10 Students
The overarching goal of this NSF REU Summer Program is to immerse students in a meaningful and highly interdisciplinary research environment within the structural engineering domain and to teach them that design does not end with construction. Instead, designing for safety embodies: quantifying potential load conditions, damage mechanics, and uncertainties; monitoring for anomalies during operations; processing this information through cyber-modeling via digital surrogates; and translating the information to actionable knowledge for improving current and future system designs.

I conducted research and developed several skills required to work in a research lab. I also was able to get an insight on how Master and PhD students conduct research and how graduate studies would be in a UCSD research lab.

- Yash Mhaskar
STARTneuro, funded by a NIH BP-ENDURE grant, trains, mentors, and funds diverse transfer students as they enter neuroscience research. The program provides a 10-week summer research training program and facilitates lab placements with faculty mentors during the school year. STARTneuro is a collaboration between the Division Biological Sciences and the Undergraduate Research Hub.

10 Students
Summer Training Academy for Research Success

The Summer Training Academy for Research Success (STARS) program is an eight-week summer research academy for community college students, undergraduate students, recent college graduates, and masters students. Opened to all disciplines, STARS offers student participants a rigorous research opportunity with esteemed UC San Diego faculty, informative transfer and graduate school preparation workshops, and educational, cultural, and social activities in sunny San Diego.

83 Students

I enjoyed and learned a lot by joining STARS program in summer 2021. During this program I focused on Image processing and learning R language along with practicing on giving how to give a professional presentation.

- Romina Shirazi
The Triton Research & Experiential Learning Scholars (TRELS) program is sponsored by the Council of Provosts of the Undergraduate Colleges at UC San Diego and the Undergraduate Research Hub. TRELS empowers students to pursue intellectual opportunities beyond the classroom, by providing support in the form of funding and mentorship.

236 Awards given to 169 unique students

The TRELS program allowed me to experience research for the first time in my life. ... I now know that those in research come from a wide variety of backgrounds and identities which really comforts me and makes me feel more included.

- Chloe Le
The **UC LEADS** program prepares promising undergraduate students for advanced education in STEM. This program is designed to identify educationally or economically disadvantaged undergraduates who are likely to succeed in graduate school, and to provide these students with undergraduate educational experiences that will prepare them to assume positions of leadership in industry, government, public service, and academia following completion of a doctoral STEM degree.

**10 Students**

*With this experience, I learned how to read research literature, plan a research project, and how to overcome all the different obstacles that arise while doing research. This experience shed light on what it is like doing research in the area of autonomous systems, and what it is like to do research as an undergraduate student here at UCSD.*

- Daniel Maldonado Naranjo
The **UC Scholars Program** is an 8-week, full-time summer research experience for undergraduates, supported by UC San Diego's Office of Student Affairs and Undergraduate Research Hub. The program provides students with the skills to become research scholars, stimulates students' serious consideration of graduate study, and increases learning and networking opportunities for students committed to pursuing either a professional or academic research career.

18 Scholars

*The UC Scholars Program allowed to discover my passion in research. It helped being more academically engaged, willing to take on challenges and greatly benefitted me in regards to getting a clear goal in college.*

- Yidi Gao
In UC San Diego's Undergraduate Research Scholarship (URS) program, several different donor-funded scholarships (listed on next page) are available across multiple research areas. Undergraduate students use the funds for a research project to be completed over the summer under the guidance of a UC San Diego faculty mentor.

I loved the experiences that this summer provided me, and my research allowed me to understand and examine the changes needed to help advance the treatment of the transgender community within the sphere of healthcare.
- Brooklyn Moore
Undergraduate Research Scholarships

- Chancellor's Research Scholarship for Arts and Humanities
- Chancellor's Research Scholarship for Social Sciences
- David Marc Belkin Memorial Research Scholarship for Environment and Ecology
- David Jay Gambee Memorial Research Scholarship for Governance and Social Impact Projects
- Doris A. Howell Foundation Research Scholarship for Women's Health
- Eureka! Scholarship for Biological Sciences Majors
- Springboard Eureka! Scholarship for Biological Science Majors (Hong Kong)
- Frances Hellman Research Scholarships for Physics
- HIV Institute - Transgender/Gender Non-Binary Community Health Research Scholarship
- Julia Brown Research Scholarship for Health and Medical Professions
- Ledell Family Research Scholarship for Science and Engineering
- NEW Scholars Program
- Philip and Elizabeth Hiestand Scholarship for Cross-Disciplinary Research in SIO and Engineering
- Robert C. Dynes and Ann Parode Dynes Research Scholarships for Physics
- Starbucks Sustainable Solutions and Learning Opportunities Research Scholarship
Youth Enjoy Science: Multidisciplinary Educational Approach to Reducing Cancer Disparities

Youth Enjoy Science: Multidisciplinary Educational Approaches to Reducing Cancer was a National Cancer Institute-funded program through their Youth Enjoy Science initiative. Through classroom and laboratory activities, students learned about cancer, the development and exacerbation of cancer disparities associated with bio-behavioral factors, and possible resolutions to these disparities. Students also gained experience in conducting in-depth analysis of scientific literature and preparing an abstract and poster for national Conference.

Dr. Sadler's program has helped me apply my knowledge I have learned at UCSD and expanded upon it. I now have the skills needed to further explore the health's disparities my community faces and make a positive impact.  
- Rowan Ustoy
Undergraduate Researchers
Kali Boston  
*Theatre*  
**Project:** Breathable Streets  
**Mentors:** Patrick Anderson, PhD, Caroline Collins, PhD, Christina Aushana

Sabrina Chen  
*Literature/Writing*  
**Program:** Honors Program (Literature)  
**Project:** Crows and Other Animalistic Tendencies  
**Mentor:** Lily Hoang, MFA  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Kaitlin Clemmer  
*Literature/Writing, Japanese Studies*  
**Project:** Male Homosexual Representation in Japanese Animated Media: Problematic Fetishization, Heteronormative Framing, and the Dismantling of the “Other”  
**Mentor:** Christena Turner, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Marisa DeLuca  
*Visual Arts (Studio)*  
**Programs:** TREL (Fall, Winter, Spring), Honors Program (Visual Arts)  
**Project:** Or No Side: Memories of a Gentrified Community  
**Mentor:** Monique van Genderen, MFA  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Tianrui Huang  
*Philosophy, Economics*  
**Program:** TREL (Spring)  
**Project:** The Subjectivity and Objectivity in New Reporting  
**Mentor:** Monique Wonderly, PhD

Elizabeth E. Ingram  
*Literature/Writing*  
**Programs:** Honors Program (Literature), URS (Chancellor’s Research Scholarship for Social Sciences)  
**Project:** Quick Escape: Use of Inclusive Language and Coordination of Bias Reporting Mechanisms Creates a Better User Experience  
**Mentor:** Leslie Carver, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference
Denia Marquez
*Philosophy*
**Program:** McNair
**Project:** Addiction, Attachment and the Ethics of Grief in Recovery
**Mentor:** Monique Wonderly, PhD
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UC San Diego Summer Research Conference

Sara Santibanez
*Visual Arts (Studio)*
**Program:** TRELS (Summer)
**Project:** Access Art San Diego- A public Service
**Mentor:** Leslie Carver, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Kristina Stahl
*Art History/Studio Art*
**Program:** TRELS (Summer)
**Project:** Museums & Justice: An Exploration of Power, Privilege, & Protest
**Mentor:** Grant Kester, PhD
**Conference Presentations:** 2021 UC San Diego Undergraduate Research Conference

Phoenix Wang
*Philosophy, Clinical Psychology*
**Read Student Spotlight Here**
**Program:** TRELS (Fall, Winter)
**Project:** A Tale of Two Senses of Moral Responsibility: Incorrigible Psychopathic Wrongdoing
**Mentor:** David Brink, PhD
**Conference Presentations:** 2021 American Philosophical Association Pacific Division Meeting, 2021 UC San Diego Undergraduate Research Conference

Jeffrey Xing
*Interdisciplinary Computerized Arts (Music), Psychology (Sensation and Perception)*
**Programs:** UC Scholars, Honors Program (Psychology), HDSI Scholarship
**Project:** Songbirds as Composers: Understanding Animal Communication with Music and Auditory Aesthetics
**Mentors:** Tim Sainburg, Timothy Gentner, PhD
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference
Undergraduate Researchers

**Biological Sciences**

**Stefani Acosta**  
*Human Biology*  
**Program:** Creating Scientists to Address Cancer Disparities Summer Program  
**Project:** Reasons why Hispanic Communities in Border Cities Have Higher Rates of Blood Cancer Diagnosis vs. Non-Border Cities  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

**Natalia Avina Ochoa**  
*Molecular and Cell Biology*  
**Project:** Investigating the Effect of the Tumor Microenvironment in T Cell Gene Expression in Pancreatic Ductal Adenocarcinoma (PDAC)  
**Mentors:** Steven Zhao, PhD, Susan Kaech, PhD  
**Conference Presentation:** 2020 Annual Biomedical Research Conference for Minority Students

**Gabriella Busco**  
*Physiology and Neuroscience, Public Health (Epidemiology)*  
**Program:** FMP  
**Project:** Body Image, Mental Health, And Quality of Well-Being: A Cross-Sectional Study of Young Adults in a College Setting  
**Mentor:** Job Godino, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

**Caitlyn Callaway**  
*Human Biology*  
**Program:** McNair  
**Project:** D1 and D2 Medium Spiny Neuron Activity in the Cdk5 Parkinson’s Disease Tremor Model  
**Mentor:** Kuo-Fen Lee, PhD  
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UC San Diego Summer Research Conference

**Jasmine Castellanos**  
*Biology* (California State University, Fullerton)  
**Program:** STARS  
**Project:** Machine learning model predicts the level of open chromatin from genetic variants  
**Mentor:** Graham McVicker, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference
Undergraduate Researchers

Anu Chaparala
*General Biology*
**Program:** FMP  
**Project:** A Comprehensive Literature Review of Alpha-Pyrrolidinovalerophenone (Î±-PVP) aka "Flakka" in its Surveillance, Presentation, and Treatment in Emergency Medicine  
**Mentors:** Gary Vilke, MD, Edward Castillo, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Shiantel Chiang
*Neurobiology*
**Program:** Maryam Ahmadian Fellowship  
**Project:** The Role of Gut Microbial Bile Acid Deconjugation on PCOS  
**Mentor:** Amir Zarrinpar, MD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Natalie Chavarria
*Human Biology*
**Program:** TRELS (Winter, Spring)  
**Project:** Analyzing the Benefits of the Market Match Program and the Incorporation of CalFresh Benefits at San Diego Farmers Markets  
**Mentor:** Leslie Lewis, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Christopher Contreras
*Neurobiology*
**Program:** TRELS (Winter, Spring)  
**Project:** To what extent does instructor behavior around structuring student discussions affect the variability of noise during discussions?  
**Mentor:** Melinda Owens, PhD

Jair Cortes
*Environmental Systems (Ecology, Behavior & Evolution)*  
**Project:** Assessing San Diego’s Clam Aquaculture Market  
**Mentor:** Theresa Talley, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Madison Chew
*Human Biology*
**Program:** TRELS (Fall, Winter)  
**Project:** Reporting Confirming and Disconfirming Evidence in Discrimination Cases  
**Mentor:** Gail Heyman, PhD
My research experience was very educational and provided different field work experiences. I gained a greater understanding of local marine ecology and the interconnected relationships between human and marine communities and economies.  —Jair Cortes

Jehan Ezzulddin
Human Biology
Program: TRELs (Fall), URS (Chancellors)
Project: Relationship Between Social Determinants of Health and Allostatic Load
Mentor: Sandra Daley, MD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Xiomara Gaeta Agreda
General Biology
Program: Creating Scientists To Address Cancer Disparities Program
Project: Factors contributing to poor cervical cancer outcomes in Latinas in the United States
Mentors: Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Geenee Gonzales
Kinesiology (San Diego State University)
Program: Creating Scientists To Address Cancer Disparities Program
Project: The Impact of Obesity on Breast Cancer Risk and Survival Among Asian American Women
Mentors: Vanessa Malcarne, PhD, Georgia Robins Sadler, PhD, France Nguyen-Grozavu, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Nadia Haghani
General Biology
Read Student Spotlight Here
Program: FMP
Project: A closer look at cuticle-resident microbes and their impact on Caenorhabditis elegans physiology
Mentors: Molly Matty, PhD, Sreekanth Chalasani, PhD
Award: 2020 Society for Advancement of Chicanos/Hispanos and Native Americans in Poster Presentation Award, Life Sciences/Microbiology
Joshua Hartman  
*Human Biology*  
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** Factors associated with increased risk of multiple myeloma in the African American community  
**Mentors:** Leslie Crews, PhD, Georgia Robins Sadler, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Jan Hsiao  
*Biology (Bioinformatics)*  
**Program:** URS (Eureka!)  
**Project 1:** Identification of Ultrasound-Sensitive Ion Channels in Bioluminescent Dinoflagellates  
**Project 2:** TRP ion channel diversity and evolution highlights molecular sensors in animal diversification and biology  
**Mentors:** Sreekanth Chalasani, PhD, Eric Edsinger  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Victoria Herrera  
*Human Biology*  
**Program:** Creating Scientists Program to Address Cancer Disparities  
**Project:** How Issues in Dermatology Education and Literature may cause Disparities in Skin Cancer Patients of Hispanic and African Descent  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Nkechinyere Iroanusi  
*Human Biology*  
**Programs:** FMP, TRELS (Summer)  
**Project 1:** Trends in Marijuana Use Before and After Recreational Legalization in California  
**Mentor:** Edward Castillo, PhD  
**Project 2:** What Does Compassion Mean to Uninsured and Under-Resourced Communities of Color?  
**Mentor:** Elaine Tanaka, MD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference
Undergraduate Researchers

Mianjel Jack
*Neuroscience* (Xavier University of Louisiana)
**Program:** STARS  
**Project:** The Neural Basis of Infants’ Preference for Helpers  
**Mentor:** Lindsey Powell, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Zichen Jiang
*Biology (Bioinformatics)*
**Program:** FMP  
**Project 1:** Analysis of the male X chromosome's 3D structure and gene expression  
**Mentors:** Ferhat Ay, PhD, Abhijit Chakraborty, PhD, Joaquin Reyna  
**Project 2:** Unmatched Somatic Variant Calling  
**Mentors:** Marcos Diaz Gay, Ludmil Alexandrov

Dalia Koujah
*Physiology and Neurosciences*
**Program:** Youth Enjoy Sciences  
**Project:** Barriers to Breast Cancer Screening for Arab American Women  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Minh Le
*Microbiology, Pharmacological Chemistry*
**Programs:** FMP, Division of Physical Sciences  
**Summer Research Award, Charles L. Perrin Summer Research Fellowship, Honors Program (Chemistry, Biochemistry), D. E. Shaw Research Science and Engineering Undergraduate Fellowship**  
**Project:** Elucidating dynamics from cryo-EM data  
**Mentors:** Mark Herzik, PhD, Kelly McGuire, PhD  
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UC San Diego ACSSA 15th Annual Undergraduate Research Symposium in Chemistry, 2021 SoCal Undergraduate Chemistry Research Symposium  
**Awards:** 2021 UC San Diego ACSSA 15th Annual Undergraduate Research Symposium in Chemistry Outstanding Poster Award, 2021 SoCal Undergraduate Chemistry Research Symposium Outstanding Poster Award
Undergraduate Researchers

Chloe Le
General Biology
Program: TRELs (Summer)
Project: Inclusivity at UCSD: Exploring the relationship between teacher identity and course content
Mentor: Christoforos Mamas, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Michelle Liu
Molecular and Cell Biology
Program: URS (Ledell Family Research Scholarship for Science and Engineering)
Project: Optimizing a chemical-genetic approach to define substrates of PKCα in Alzheimer’s Disease
Mentors: Anne Hiniker, PhD, MD, Farbod Shavarebi
Conference Presentation: 2021 UC San Diego Summer Research Conference

Shina Luu
General Biology, Global Health
Program: FMP
Project: TikTok on Public Health Dissemination: Clinical Trials
Mentor: Georgia Robins Sadler, PhD
Conference Presentation: 2021 UC San Diego Online Undergraduate Research Symposium

Ishta Madan
Molecular and Cell Biology
Program: TRELs (Fall, Winter, Spring)
Project 1: Regulation of Nuclear Properties in the Drosophila Heart
Project 2: Effect of LamC Overexpression on nuclear size and DNA changes with age in Drosophila
Mentors: Natalie Kirkland, PhD, Adam Engler, PhD

I learned how to use several applications on the lab’s remote desktop, such as live heart analysis software (SOHA), image analysis software (fiji), and statistical software (Prism) to collect data from images and movies of the heart.
– Ishta Madan

Katya Marchetti
Neurobiology
Program: URS (Eureka!)
Project: Investigating the Role of Erythroblast Transformation Specific (ETS1/ETS2/ETV2) Genes in Hypoplastic Left Heart Syndrome
Mentors: Stacey Glasgow, PhD, Paul Grossfeld, MD, Karen Ocorr, PhD
Undergraduate Researchers

Ola Mostafa
Molecular and Cell Biology
Program: UC Scholars
Project: Investigating the Driving Factors of PD-1 Clustering
Mentor: Enfu Hui, PhD
Conference Presentation: 2021 UC San Diego Undergraduate Research Conference

Gautam Narayan
Neurobiology
Program: UC Scholars
Project: Theta oscillations and the modulation of time cell sequences in the CA1 layer during a spatial alternation task
Mentor: Stefan Leutgeb, PhD
Conference Presentation: 2021 UC San Diego Undergraduate Research Conference

Ida Nikjeh
Neurobiology
Program: Creating Scientists to Address Cancer Disparities Program
Project: The lack of diversity in genomic research and stem cell treatments usage due to a deficiency of stem cell donors
Mentors: France Nguyen-Grozavu, PhD, Georgia Robins Sadler, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Brenda Ochoa
Molecular and Cell Biology
Program:Creating Scientists to Address Cancer Disparities Program
Project: Addressing Environmental Health Disparities in Hispanic Children Diagnosed With Pediatric Acute Lymphoblastic Leukemia
Mentors: Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD, Bing Ren, PhD

URS, Eureka! was a great way to immerse myself into a project that I was passionate about and build connections with scientists and staff members at UCSD, as well as collaborate with other undergraduate scientists.

- Katya Marchetti

Student Spotlight: SANGA ZAKI
Shawn Ogden

_Biology_ (San Diego State University)

**Program:** Youth Enjoy Science

**Project 1:** Effects of the gut microbiome on polycystic ovarian syndrome: relationship to uterine cancer deaths in African American women

**Project 2:** Researchers Need a Well-Developed Method to Increase African American Participation in Clinical Trials

**Mentors:** Scott Kelley, PhD, Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD

**Conference Presentation:** 2020 International Cancer Education Conference


Andrea Padilla

_General Biology_

**Program:** Youth Enjoy Science

**Project 1:** End of life and dying conversations: The power of religion and spirituality for U.S. Latinx advanced cancer patients and their loved ones

**Project 2:** The Power Religion and Spirituality Hold in the Dying Process for Latinx Advanced Cancer Patients and Their Loved Ones

**Mentors:** Georgia Robins Sadler, PhD, Veronica Cardenas, PhD

**Conference Presentation:** 2021 UC San Diego Summer Research Conference


Undergraduate Researchers

Mitchell Pernia  
*Biology* (San Diego State University)  
**Program:** Creating Scientist to Address Cancer Disparities Program  
**Project:** A comparison of the oral microbiome of children exposed to thirdhand-smoke and adult smokers as a risk factor for oral cancer  
**Mentors:** Vanessa Malcarne, PhD, Georgia Robins Sadler, PhD, France Nguyen-Grozavu, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Vivian Phan  
*Human Biology*  
**Program:** TRELS (Summer)  
**Project:** Using Single Nucleus Epigenomics to Study Heart Failure  
**Mentor:** Sebastian Preissl, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Dustin Pwee  
*Human Biology*  
**Project 1:** A novel class of TMPRSS2 inhibitors potently block SARS-CoV-2 and MERS-CoV viral entry and protect human epithelial lung cells  
**Project 2:** Proteolytic signatures to differentiate eosinophil- and neutrophil-driven asthma  
**Mentor:** Anthony O'Donoghue, PhD  

Emanoelle Querido  
*Neurobiology and Public Health*  
**Project:** Detecting FOXG1 in Brain Organoids  
**Mentor:** Angels Almenar, PhD

Stacy Pittman  
*Physiology and Neuroscience*  
**Project:** Lifestyle Medicine Education: Building Healthy Habits of Exercise and Nutrition through Innovative Lecture/Study Interventions with College Students  
**Mentor:** Claire Meaders, PhD
Undergraduate Researchers

I learned how to be a better scientist from designing good experiments, organizing for a productive field season, collecting samples, and writing and presenting about scientific work.  
- Cindy Tran

Harriet Song  
*Molecular and Cell Biology*  
**Programs:** TRELs (Winter, Spring), URS (Eureka! Research Scholarship for Biological Sciences Majors)  
**Project 1:** The effect of the Amino-Terminal Fragment (ATF) on the activity and inhibition of urokinase-type plasminogen activator (uPA)  
**Project 2:** The linker’s effect on the activity of murine urokinase-type plasminogen activator (muPA)  
**Mentors:** Constanza Torres Paris, Elizabeth Komives, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Bettina Suarez  
*Biology*  
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** Factors explaining higher rates of breast cancer in Hispanic women in the United States than Hispanic women in Mexico  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Luisa Taverna  
*Biology, Philosophy* (Emory University)  
**Programs:** STARS, DBMI Summer Internship  
**Project:** Genetic Diversity and Association Studies in LatinX populations using All of Us Research Cohort  
**Mentor:** Lucila Ohno-Machado, PhD, MD

Cindy Tran  
*General Biology*  
**Program:** URS (Eureka!)  
**Project 1:** Behavioral Syndromes in Tui Chub and its Ecological Impacts  
**Project 2:** Flying Plankton: Dispersal Syndromes in Aquatic Microbes  
**Mentor:** Jonathan Shurin, PhD  
**Conference Presentations:** 2021 UC San Diego Undergraduate Research Conference, 2021 UC San Diego Summer Research Conference
Diane Tran  
*Human Biology*  
**Program:** Creating Scientists to Address Cancer Disparities Program  
**Project:** Factors Contributing to Low Rates of End-of-Life (EOL) Care Use in Asian American Cancer Patients  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD, Veronica Cardenas, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Joshua Tran  
*Human Biology*  
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** Cumulative exposure: Could the effect of harmful microbiome exposures negatively impact African-American women with breast cancer?  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD, Jack Gilbert, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Ann Truong  
*Human Biology*  
**Program:** FMP  
**Project:** COVID-19: Lasting Symptoms and Effects on the Cardiovascular System  
**Mentor:** Faith Quenzer, DO  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Brandon Tsai  
*General Biology*  
**Program:** TRELS (Spring)  
**Project:** Coevolution of Morphological Traits on Threespine Stickleback  
**Mentor:** Diana Rennison, PhD  
**Conference Presentations:** 2021 UC San Diego Undergraduate Research Conference, 2021 UC San Diego Online Undergraduate Research Symposium

Rowan Ustoy  
*General Biology*  
**Program:** Multidisciplinary Educational Approach to Reducing Cancer Disparities  
**Project:** Examining diet change as a contributing factor of higher cancer rates in Puerto Rican U.S. migrants  
**Mentor:** Georgia Robins Sadler, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference  
https://dhmi.org/becoming-your-best-self-ucsd-students-health-section/  
Undergraduate Researchers

Smriti Variyar
*Molecular and Cell Biology, Chemistry*
**Program:** UC Scholars  
**Project:** Investigating the mechanism of mitotic checkpoint initiation  
**Mentor:** Arshad Desai, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Danny Yu
*Molecular and Cell Biology*  
**Program:** FMP  
**Project:** Using TikTok as a Public Health Dissemination Platform: The Analytics  
**Mentor:** Georgia Robins Sadler, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Bailey Man
*Data Science*  
**Programs:** TRELs (Winter), HDSI Scholarship  
**Project 1:** Cryosphere Visualization and Analysis  
**Mentor:** Ilya Zaslavsky  
**Project 2:** Dolphin Tracking and Cognition Detection  
**Mentor:** Ilya Zaslavsky, PhD, Zhen Zhai  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference  
**Award:** COVID-19 Data Challenge, 2nd Place Retail & Leisure

Arjun Sawhney
*Data Science*  
**Project:** Planning for a Just Renewable Energy Transition in India  
**Mentor:** Michael Davidson, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

I enjoyed my research experience conducting an independent study on India’s clean energy transformation in the Davidson Lab at UCSD.  
- Arjun Sawhney

Isac Lee
*Data Science*  
**Program:** FMP  
**Project:** Financial Benefits and Inequities of Household Solar PV Support Programs  
**Mentor:** Michael Davidson, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Data Science
Undergraduate Researchers

**Sam Schickler**
*Data Science*
**Program:** HDSI Scholarship  
**Project:** Comparing Machine Learning to Conventional Statistical Approaches for Classification of Neurons in 2p Microscopy Data  
**Mentor:** Gal Mishne, PhD

**Sirui Tao**
*Data Science, Statistics & Probability*
**Program:** HDSI Scholarship  
**Project:** Physion: Evaluating Physical Prediction from Vision in Humans and Machines  
**Mentor:** Judith Fan, PhD

**Stephany Alonso**
*Materials Science and Engineering (UC Irvine)*  
**Programs:** STARS, DBMI Summer Internship  
**Project:** Association of Obesity and Patient Recovery in Ambulatory Surgery  
**Mentor:** Rodney Gabriel  
**Conference Presentations:** 2021 Summer Internship Symposium and Career Conference, 2021 UC San Diego Summer Research Conference

**Jacob Ayers**
*Electrical and Computer Engineering*
**Program:** E4E REU  
**Project:** Automated Acoustic Species Identification  
**Mentors:** Curt Schurgers, PhD, Ryan Kastner, PhD  
**Conference Presentation:** 2021 International Conference on Machine Learning  
**Award:** NSF REU Film Competition, 3rd place  

**Being able to participate in the STARS 2021 has been a rewarding experience because it has taught me that many of my anxieties facing graduate school are common and valid. This program has reaffirmed that graduate school is a possibility for someone like me.***

- Stephany Alonso
Undergraduate Researchers

Nishant Balaji  
*Computer Engineering*  
**Program:** URS (Ledell Family Scholarship)  
**Project:** Acoustic Species Identification  
**Mentor:** Curt Schurgers, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Natalia Berrios-Rivera  
*Mechanical Engineering*  
**Program:** McNair  
**Project 1:** Spatial Distribution of Faults and Fissures at the East Pacific Rise  
**Mentor:** Ross Parnell-Turner, PhD  
**Project 2:** Central Anomaly Magnetization High and Crustal Accretion at the East Pacific Rise  
**Mentor:** Jeff Gee, PhD  
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UCLA McNair Conference, 2021 UC San Diego Summer Research Conference

Anshul Birla  
*Computer Engineering*  
**Program:** FMP  
**Project 1:** Identifying Trends Impacting Student Success  
**Mentor:** Christine Alvarado, PhD  
**Project 2:** Building Training Datasets for NLP Research  
**Mentor:** Amarnath Gupta, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Stuart Boynton  
*Computer Engineering*  
**Program:** ECE SRIP  
**Project:** Advanced Control and Optimization for Autonomous Vehicles in Mixed Traffic Systems  
**Mentor:** Yang Zheng, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Kartik Choudhary  
*Nanoengineering*  
**Program:** FMP  
**Project:** Comparison of the Mechanical Properties of a Semiconducting Polymer Deposited using Roll-to-Roll-Compatible Processes for low-cost development of flexible electronic materials  
**Mentor:** Darren Lipomi, PhD  
**Award:** NSF Graduate Research Fellowship

Samantha Fong  
*Mechanical Engineering*  
**Read Student Spotlight Here**

**Program:** FMP  
**Project:** Simulation and Analysis of Additively Manufactured Prosthetic Devices  
**Mentor:** Albert Lin  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium
Declan Freeman-Gleason
*Electrical and Computer Engineering*
**Program:** E4E REU
**Project:** E4E Baboons On the Move
**Mentors:** Curt Schurgers, PhD, Ryan Kastner, PhD

Ronaldo Garcia-Hernandez
*Computer Science*
**Program:** CSE ERSP
**Project:** Understanding and Aiding Non-Native English Speakers Learning Computer Science
**Mentor:** Adalbert Gerald Soosai Raj, PhD

Yidi Gao
*Aerospace Engineering*
**Program:** TRELS (Fall), UC Scholars
**Project:** Thermal Switch Design for Lunar/Martian Missions
**Mentor:** Carlos Coimbra, PhD

Brandon Ho
*Computer Engineering*
**Program:** ECE SRIP
**Project:** A Miniaturized Wireless Data Streaming System for In-vivo Vagus Sentinels
**Mentor:** Imanuel Lerman, MD, Yifeng Bu

Khang Hoang
*Bioengineering (Biotechnology)*
**Program:** Genentech
**Project:** Stimulated Raman Spectroscopy Imaging of Lipid Metabolism Alteration in Amyotrophic Lateral Sclerosis
**Mentor:** Lingyan Shi, PhD

Conference Presentation: 2021 UC San Diego Summer Research Conference

Melissa Ignacio
*Computer Science*
**Program:** CSE ERSP
**Project:** Non-native English Speaking Students in Computer Science
**Mentor:** Adalbert Gerald Soosai Raj, PhD

Rishaan Kenkre
*Bioengineering (Bioinformatics)*
**Program:** Creating Scientists to Address Cancer Disparities Program
**Project:** Racial, ethnic and socioeconomic disparities to access cancer targeted therapies using real-world evidence analysis
**Mentors:** Olivier Harismendy, PhD, Vanessa Malcarne, PhD, Georgia Robins Sadler, PhD

Conference Presentation: 2021 UC San Diego Summer Research Conference

Khang Hoang
*Bioengineering (Biotechnology)*
**Program:** Genentech
**Project:** Stimulated Raman Spectroscopy Imaging of Lipid Metabolism Alteration in Amyotrophic Lateral Sclerosis
**Mentor:** Lingyan Shi, PhD

Conference Presentation: 2021 UC San Diego Summer Research Conference
Undergraduate Researchers

Angelina Le  
*Computer Engineering*  
**Program:** CSE ERSP  
**Project:** Non-native English speaking students in Computer Science  
**Mentor:** Adalbert Gerald Soosai Raj, PhD

Hope Leng  
*Bioengineering (Biotechnology)*  
[Read Student Spotlight Here]  
**Project:** Engineering an Activity-Based Nanosensor for the Rapid Diagnosis of Traumatic Brain Injury  
**Mentors:** Ester Kwon, PhD, Julia Kudryashev  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference  
**Award:** 2021 NSF Graduate Research Fellowship  

Sharon (Wan-Hsuan) Lin  
*NanoEngineering*  
**Program:** TREL (Spring)  
**Project:** The Freshman Handbook to Solid-State Batteries  
**Mentor:** Shirley Meng, PhD

Adolfo Lopez Miranda  
*Mechanical Engineering*  
**Program:** CW3E Internship Program  
**Project:** Developing telemetry systems for stations in the Hydroclimate Network  
**Mentors:** Douglas Alden, Ava Cooper, Anna Wilson

Rachel Luu  
*Mechanical Engineering*  
[Read Student Spotlight Here]  
[Read Research Spotlight Here]  
**Programs:** McNair, TREL (Fall)  
**Project:** Bioinspiration of the Equine Hoof  
**Mentor:** Marc Meyers, PhD  
**Conference Presentations:** 2020 Louis Stokes Midwest Regional Center of Excellence Annual Conference, 2021 UCLA National McNair Conference, 2021 UC San Diego Summer Research Conference  
**Award:** 2020 Louis Stokes Midwest Regional Center of Excellence Annual Conference, People's Choice Award

Daniel Maldonado Naranjo  
*Mechanical Engineering*  
**Programs:** STARS, UC LEADS  
**Project:** Integrating Simulink Models to Reachability Analysis  
**Mentor:** Sylvia Herbert  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference
Yash Mhaskar  
*Mechanical Engineering (Controls and Robotics)*  
**Program:** NSF REU Program on Designing for Safety and Safety by Design  
**Project:** Smart K-tapes and EMG Sensors  
**Mentor:** Ken Loh, PhD

Katie Miyamoto  
*Electrical Engineering*  
**Program:** HDSI Scholarship  
**Project:** Aye-Aye Sleep Monitoring Project  
**Mentors:** Curt Schurgers, PhD, Ryan Kastner, PhD, Nathan Hui

Judy Mohamad  
*Mechanical Engineering*  
**Program:** STARS  
**Project:** Pneumatically actuated soft robot feet  
**Mentor:** Emily Lathrop  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Tuyetthuc Nguyen  
*Mechanical Engineering* (California Polytechnic State University - San Luis Obispo)  
**Program:** E4E REU  
**Project:** Aye-Aye Sleep Monitoring  
**Mentors:** Ryan Kastner, PhD, Curt Schurgers, PhD, Nathan Hui

Xavier Perez  
*Electrical Engineering*  
**Programs:** TRELs (Fall, Winter, Spring), STARS, UC LEADS  
**Project:** Low-Cost Home-Made Recording Chambers for Zebra Finch Birds  
**Mentor:** Vikash Gilja, PhD  
**Conference Presentation:** 2021 Koret UC LEADS Research & Leadership Symposium  
**Award:** 2021 Top Honors Winner in the Engineering & Computer Sciences category, 2021 Koret UC LEADS Research & Leadership Symposium

Eleanor Quirk  
*Chemical Engineering*  
**Program:** TRELs (Spring)  
**Project:** Nucleotide Adsorption onto TiO2 Nanoparticles: A Quantitative Insight on Electrostatic Interactions  
**Mentors:** Izaac Sit, Vicki Grassian, PhD  
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UC San Diego Undergraduate Research Conference, 2021 Spring American Institute of Chemical EngineersProjects Showcase, Nano and Chemical Engineering Day Innovation Competition  
**Award:** 2021 The Future of Chemistry Scholarship for Women
Anthony Quiroga
Computer Science
Programs: TRELs (Summer), CSE ERSP
Project 1: Expanding Hardware Continuous Integration on Tock
Project 2: Classification of Interactions through Proximity Data
Mentor: Pat Pannuto, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Tanner Ragan
Mechanical Engineering (UC Merced)
Program: STARS
Project: Flow Characterization of Plasma Actuated Flat Plate
Mentors: Oliver Schmidt, Brandon Yeung
Conference Presentation: 2021 UC San Diego Summer Research Conference

Nicholas Rowlett
Electrical Engineering
Programs: ECE SRIP, E4E REU
Project: Smartfin
Mentor: Nathan Hui
Conference Presentation: 2021 UC San Diego Summer Research Conference

Meghan Shen
NanoEngineering
Program: TRELs (Fall)
Project 1: Broadband UV-VUV Laser Pulses for Efficient X-Ray Generation
Mentor: Tenio Popmintchev, PhD
Project 2: Advanced Electrode Material Synthesis and High Energy Battery Development
Mentor: Shirley Meng, PhD, Yixuan Li

I really enjoy working at the lab! It's an exciting environment and no two days are ever the same.
- Meghan Shen
Undergraduate Researchers

Romina Shirazi
Biomedical Engineering
**Program:** STARS, DBMI Summer Internship
**Project:** Predicting the Outcome of Spine Surgeries using Image Processing and Machine Learning
**Mentor:** Shamim Nemati, PhD
**Conference Presentations:** 2021 DBMI Summer Internship Symposium, 2021 UC San Diego Summer Research Conference

Amita Stowitts
Computer Science, Environmental Systems
**Program:** CSE ERSP
**Project:** Non-Native English Speaking Students in Computer Science
**Mentors:** Adalbert Gerald Soosai Raj, PhD

Ananya Thridandam
Mechanical Engineering
**Program:** URS (Philip and Elizabeth Hiestand)
**Project:** Renewable Energy Resource Assessments in the Western United States
**Mentor:** Michael Davidson, PhD
**Conference Presentations:** 2021 UC San Diego Undergraduate Research Conference, 2021 UC San Diego Summer Research Conference

Elizabeth Tran
Computer Science
**Program:** CSE ERSP
**Project:** Permission Request on Websites
**Mentors:** Ariana Mirian, Gautam Akiwate, Geoff Voelker, PhD

Jerry Wu
Bioengineering (Biotechnology)
**Program:** UC Scholars
**Project:** 3D Bioprinted hiPSC-derived Cardiac Micro-Tissues to Investigate Nanoparticle Cardiotoxicity
**Mentor:** Shaochen Chen, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Elizabeth Tran
Computer Science
**Program:** CSE ERSP
**Project:** Permission Request on Websites
**Mentors:** Ariana Mirian, Gautam Akiwate, Geoff Voelker, PhD

Jerry Wu
Bioengineering (Biotechnology)
**Program:** UC Scholars
**Project:** 3D Bioprinted hiPSC-derived Cardiac Micro-Tissues to Investigate Nanoparticle Cardiotoxicity
**Mentor:** Shaochen Chen, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference
Emmie Yao

NanoEngineering

Program: URS (Ledell Science and Engineering Scholarship)

Project: 3D Bioprinting of Corneal Stem Cells

Mentors: Alis Balayan, Zheng Zhong, Shaochen Chen, PhD

Conference Presentation: 2021 UC San Diego Summer Research Conference

Publications:

Ailyn Alicea

Public Health

Program: Creating Scientists to Address Cancer Disparities Program

Project: Why are Hispanic smokers are less likely to be advised to quit compared to white smokers? Cultural and Institutional Factors

Mentors: Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD, David Strong, PhD

Conference Presentation: 2021 UC San Diego Summer Research Conference

Publications:

I gained insight into other research topics and the diversity within this scientific community. I enjoyed learning the science of public health and how we must advocate as researchers.

- Ailyn Alicea
Undergraduate Researchers

**Anthony Cirilo**  
*Public Health*  
**Program:** Youth Enjoy Science  
**Project:** Allostatic Load in Pediatric Cancer Survivors: Predicting Future Adverse Health Outcomes  
**Mentors:** Suzi Hong, PhD, Georgia Robins Sadler, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

**Hiela Manely**  
*Public Health*  
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** Barriers to Breast Cancer screening faced by Immigrant Muslim women in the United States  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

**Donna Pham**  
*Public Health*  
**Project:** Placentas of Women with CHD Demonstrate Pathological Signs of Maternal Vascular Malperfusion  
**Mentors:** Ana Rodriguez, PhD, Mana Parast, MD, PhD

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**Physical Sciences**

**Paola Anguiano Quiroz**  
*Pharmacological Chemistry*  
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** Factors Explaining why Hispanic Women Diagnosed with Breast Cancer in the United States have a Higher Risk of Mortality  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

**Carissa Avina-Beltran**  
*Physics (San Francisco State University)*  
**Program:** STARS  
**Project:** Dust from a destroyed planet obscuring the Sun-like star TYC 8830 410 1  
**Mentor:** Carl Melis, PhD

**John Brown**  
*Biochemistry*  
**Program:** TRELS (Spring)  
**Project:** Study of Chaperone Activity of Insulin-Degrading Enzyme Using Amyloid-Î² and HIV-1 p6  
**Mentor:** Lalit Deshmukh, PhD
Undergraduate Researchers

**Erick Cervantes**  
*Biochemistry/Chemistry*  
**Program:** McNair  
**Project:** Synthesis of Anti-Cancer Chemical Groups  
**Mentor:** Dionicio Siegel, PhD  
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UC San Diego Summer Research Conference

**Simon Danitz**  
*Physics (Materials Physics)*  
**Program:** TRELS (Summer)  
**Project:** Characterization of Stretchable Hydrogel Electrolytes for Zinc-Air Batteries  
**Mentors:** Zheng Chen, PhD, Guorui Cai, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

**Haifeng Ding**  
*Physics*  
**Programs:** FMP, Honors Program (Marshall College Physics)  
**Project:** Improving Di-Higgs Sensitivity at Future Hadron Colliders with Machine Learning  
**Mentor:** Javier Duarte, PhD  
**Conference Presentations:** 2021 National Council on Undergraduate Research Conference, 2021 UC San Diego Online Undergraduate Research Symposium

**Sohan Ghosh**  
*Physics (Astrophysics)*  
**Program:** FMP  
**Project:** Reducing Archival Brown Dwarf/Cool Star Spectral Data  
**Mentor:** Adam Burgasser, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium  
[https://doi.org/10.1051/0004-6361/202140300](https://doi.org/10.1051/0004-6361/202140300)

**Prothit Halder**  
*Mathematics—Computer Science*  
**Program:** CSE ERSP  
**Project:** Discrete Network Simulation for Topology Verification  
**Mentors:** George Porter, PhD, Alex Snoeren, PhD
Undergraduate Researchers

**Tiffany Hamilton**  
*Chemistry*  
**Programs:** Chemistry and Biochemistry Physical Sciences Undergraduate Summer Research Award, Chemistry and Biochemistry Perrin Fellowship  
**Project 1:** Exploration of a Redox-Neutral Mitsunobu Catalyst  
**Mentor:** Emmanuel Theodorakis, PhD  
**Project 2:** Total Synthesis of Chlorotonil A  
**Mentors:** Alexander Braddock, Emmanuel Theodorakis, PhD  
**Conference Presentation:** 2021 UC San Diego ACSSA Undergraduate Research Symposium

**Natalia Henriquez Sanchez**  
*Physics (Materials Physics)*  
**Program:** FMP  
**Project 1:** Using CMB Measurements to Understand Dark Matter Density and Statistical Methods to Forecast Uncertainties in Parameter Values  
**Mentors:** Tongyan Lin, PhD, Jung-Tsung Li  
**Project 2:** SpeX Archive Reduction to Build a Catalog of Low-Mass Star and Brown Dwarf Spectra  
**Mentor:** Adam Burgasser, PhD  
**Conference Presentations:** 2021 UC San Diego Summer Research Conference, 2021 California Alliance for Minority Participation Symposium, 2021 UC San Diego Online Undergraduate Research Symposium

**Helen Hernandez**  
*Biochemistry*  
**Program:** Creating Scientists to Address Cancer Disparities Program  
**Project:** Identifying the Protective Factors for Pediatric Brain Cancer Within Minority Versus White Non-Hispanic Infants and Children  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

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*The Perrin Fellowship and Physical Sciences Undergraduate Summer Research Award have given me the opportunity to focus on my research full-time, and this valuable time spent in the laboratory has extended my education far beyond the classroom.* - Tiffany Hamilton
Undergraduate Researchers

Katherine Izhikevich
Mathematics—Computer Science
**Project:** Evaluating the impact of the Early Research Scholars Program  
**Mentor:** Christine Alvarado, PhD  
**Award:** Gary C Reynolds Scholarship

Amaya Mendez-Molina
Pharmacological Chemistry
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** Cultural Barriers of Cancer Care for Indigenous Oaxacan Women  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Viena Le
Chemistry
**Program:** Creating Scientists to Address Cancer Disparities Program  
**Project:** Factors Explaining High Cervical Cancer and Low Screening Rates Among Victims of Sexual Abuse  
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD, Frances Nguyen-Grozavu, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Megan Li
Physics (Astrophysics)
**Program:** TRELS (Fall, Spring)  
**Project:** Active Galactic Nuclei  
**Mentor:** Karin Sandstrom, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference (Plenary Speaker)  
**Award:** 2020 Undergraduate Space Research Award, Honorary Mention

Noura Mohamed
Chemistry and Biochemistry
**Program:** TRELS (Summer)  
**Project:** Spatial Regulation of Glycolytic Enzymes on Mitochondria in Mammalian Neurons  
**Mentors:** Gulcin Pekkurnaz, PhD, Haoming Wang  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Tai Nguyen
Physics
**Program:** URS (Frances Hellman Scholarship)  
**Project:** Finn/hls4ml merge  
**Mentor:** Javier Duarte, PhD
Undergraduate Researchers

In the UC Scholars program, I was able to get a first glance of the feeling of doing research. I realized that math research is a process that requires passion, patience, and some inspirations. —Yixuan Peng

Rocco Novello
Physics (Astrophysics)
Program: FMP
Project: The Coolest Stars in the Universe
Mentor: Adam Burgasser, PhD
Conference Presentation: 2021 UC San Diego Online Undergraduate Research Symposium

Yixuan Peng
Applied Mathematics
Program: UC Scholars, Honors Program (Mathematics)
Project: Analysis of Return Time in Diffusion Map
Mentor: Alex Cloninger, PhD

Ruby Rios Ramirez
Biochemistry
Program: ADVANCE Undergraduate Institute Scholar Stanford Bioscience
Project: Monitoring Swallow Activity with Multi-Electrode Electromyography
Mentors: Gladys Ornelas, Todd Coleman, PhD
Conference Presentation: 2020 Society for Advancement of Chicanos/Hispanos and Native Americans in Science National Research Conference
Award: 2020 Society for Advancement of Chicanos/Hispanos and Native Americans in Science Research Conference Travel Award

Rahul Sehgal
Biochemistry
Program: TRELS (Summer)
Project: Science vs. the World: Breaking Down the Knowledge Barrier between Science Researchers and the General Public
Mentor: Michael Burkart, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference
Elanor Sievers  
_Biochemistry/Chemistry_  
**Program:** URS (Ledell Family Research Scholarship for Science and Engineering)  
**Project:** Determining the structure of a cysteine-less intein and improving its splicing efficiency using NMR spectroscopy and splicing assays.  
**Mentors:** Raymond Berkeley, Galia Debelouchina, PhD  
**Conference Presentations:** 2021 UC San Diego Summer Research Conference, 2021 SoCal Undergraduate Research Symposium, 2021 ACSSA Undergraduate Research Symposium  
**Awards:** 2021 SoCal Undergraduate Research Symposium Poster Award, 2021 ACSSA Undergraduate Research Symposium Poster & Video Awards

Sally Trinh  
_Biochemistry and Cell Biology_  
**Program:** Creating Scientists to Address Cancer Disparities  
**Project:** The key determinants of a survivorship care model  
**Mentor:** Georgia Robins Sadler, PhD  
**Conference Presentations:** 2021 UC San Diego Summer Research Conference, 2020 International Cancer Education Conference

Flora Wong  
_Biochemistry/Chemistry_  
**Program:** FMP  
**Project:** Heterochromatin Protein 1 and Cell Proliferation  
**Mentor:** Willis Li, PhD  
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Andy Tran  
_Biochemistry_  
**Program:** 2021 Undergraduate Summer Research Award - Student Success Center  
**Project:** Using divalent metal ions in splicing group II intro E.coli  
**Mentors:** Jason Hingey, Navtej Toor, PhD
**Wenqian Yang**  
*Pharmacological Chemistry*  
**Project:** Structure-activity relationships of curcumin-like compounds as possible treatments for Human African trypanosomiasis  
**Mentors:** Ludovica Monti, PhD, Conor Caffrey, PhD  
**Conference Presentation:** 2021 ACSSA 15th Annual Undergraduate Research Symposium in Chemistry  
**Award:** Chemistry and Biochemistry Department, Library Award  
https://doi.org/10.1021/acs.jmedchem.1c01151

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**Ethan Yi Sheng Zhu**  
*Biochemistry and Cell Biology*  
**Program:** Youth Enjoy Science  
**Project 1:** Diverse Biobank Contributions Unlock Potential Biological Disparities in Colorectal Cancer and Beyond  
**Project 2:** Help Us Help You: How Racially and Ethnically Diverse Biobank Contributions Enable Stronger Basic Biology Research  
**Mentors:** Georgia Robins Sadler, PhD, Maximiliano D'Angelo, PhD  
**Conference Presentations:** 2021 UC San Diego Summer Research Conference, 2020 International Cancer Education Conference

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**Veronica Berta**  
*Oceanic and Atmospheric Sciences*  
**Program:** McNair  
**Project:** Estimating Amine in Single Particle AMS Measurements  
**Mentor:** Lynn Russell, PhD  
**Conference Presentations:** 2021 UC San Diego Online Undergraduate Research Symposium, 2021 UC San Diego Summer Research Conference

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**Barbara Saucedo**  
*Marine Biology*  
**Program:** TRELS (Summer)  
**Project:** Optimizing fluorescent tagging of active microbial cells in deep-sea subseafloor sediments  
**Mentors:** Douglas Bartlett, PhD, Luke Fisher, Alvaro Plominsky, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference
Given that the research was funded by the NIH, I was able to network and learn so much about grant writing, and what a large community it takes to make qualitative research successful.
- Leilani Camacho

Leilani Camacho
*Cognitive Science (Neuroscience)*
**Project:** COVID-19 Vaccine Attitudes among Inland Empire Uninsured and MediCal Recipients
**Mentor:** Deborah Lefkowitz, PhD
**Conference Presentation:** 2021 UCR's Center for Health Disparities Research 2nd Annual Symposium

Andrea Contreras
*Human Developmental Sciences*
**Program:** Creating Scientists to Address Cancer Disparities
**Project:** Survival rate disparities between osteosarcoma and Ewing's sarcoma in pediatric patients
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Jordan Gomezpadilla
*Cognitive and Behavioral Neuroscience*
**Program:** Creating Scientists to Address Cancer Disparities
**Project:** Factors Associated with the Higher Incidence Rate and Lower Survival Rate of Non-Hispanic White Men Diagnosed with Glioblastomas
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Tekin Gunasar
*Cognitive Sciences*
**Program:** HDSI Scholarship
**Project:** Reducing Facial Recognition Bias with the Use of Synthetic Training Data with GANs
**Mentor:** Rafael Martins de Moraes
Undergraduate Researchers

Ryan Hajj
*Cognitive Behavioral Neuroscience*
**Program:** TRELS (Summer)
**Project:** COVID-19 Survivors and Long Term Cognitive Issues
**Mentor:** Robert Rissman, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Jaden Huynh
*Psychology (Cognitive and Behavioral Neuroscience), International Studies (Business)*
**Program:** Creating Scientists To Address Cancer Disparities
**Project:** Does psychiatric illness predict lower cancer survival rates?
**Mentors:** Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD, France Nguyen-Grozavu, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Brooke Johnson
*Global Health*
**Programs:** TRELS (Spring), BUMMP Research Apprenticeship Program
**Project:** Identification of Novel Jumbophages in Cheese
**Mentors:** Christina Saak, PhD, Rachel Dutton, PhD
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference

Megan Korhummel
*Psychology (San Diego State University)*
**Program:** Creating Scientists to Address Cancer Disparities Program
**Project:** Barriers to genetic testing in men with an increased risk for prostate cancer associated with BRCA1 and BRCA2 mutations
**Mentors:** Vanessa Malcarne, PhD, Georgia Robins Sadler, PhD
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Vy Le
*Cognitive Behavioral Neuroscience, International Business*
**Program:** FMP
**Project:** Facebook
**Mentor:** Georgia Robins Sadler, PhD
**Conference Presentation:** 2021 UC San Diego Online Undergraduate Research Symposium

Steve Anthony Maravillo
*Education Sciences, Public Health*
**Program:** TRELS (Fall, Winter)
**Project:** Effective Strategies for College and University Preparation for Latino Students in Public K-12 Educational Institutions in the San Bernardino City Unified School District
**Mentor:** Makeba Jones, PhD
Undergraduate Researchers

Guadalupe Marmolejo  
*Education Sciences*  
**Program:** TRELS (Summer)  
**Project:** Bilingualism in the Latino Student Population  
**Mentor:** Thandeka Chapman, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Olivia Michael  
*Cognitive Behavioral Neuroscience, Global Health*  
**Project 1:** Intern in Child and Adolescent Services Research Center. Project: An Analysis of Parent-Mediated ASD Interventions in Low-to-Middle Income Countries  
**Mentors:** Lauren Brookman-Frazee, Kassandra Martinez  
**Project 2:** Facilitating Caregiver Engagement in Parent-Mediated ASD Interventions in a Virtual Environment  
**Mentors:** Colby Chlebowski, PhD, Kassandra Martinez

Sapna Mehta  
*Global Health*  
**Program:** TRELS (Winter, Spring)  
**Project:** Implementation of Universal Cancer Predisposition Screening in the Pediatric Oncology Population  
**Mentor:** Dennis Kuo, MD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference  
**Publication:** Mehta, S., & Kuo, D. J. (2020). To test or not to test: Genetic cancer predisposition testing in paediatric patients with cancer. *Journal of Medical Ethics, 47*(12).  
[https://doi.org/10.1136/medethics-2020-106656](https://doi.org/10.1136/medethics-2020-106656)

Martin Montiel  
*Psychology*  
**Program:** Creating Scientists to Address Cancer Disparities.  
**Project:** Moving with the times: Alternative cancer treatments for Children.  
**Mentors:** Vanessa Malcarne, PhD, Georgia Robins Sadler, PhD, David Strong, PhD

Brooklyn Moore  
*Political Science (International Relations)*  
**Program:** URS (HIV Institute - Transgender/Gender Non - Binary Community Health Research Scholarship)  
**Project:** Changing Treatment: A Look Into the Advancement for Transgender Healthcare Procedures  
**Mentors:** Bob Leyh, Stephen Rawlings, MD, PhD
Cameron Ormiston
Global Health
Awards: NIH Postbaccalaureate Intramural Research Training Award (IRTA), 2021 NIH Academy Enrichment Program Scholar

Armin Nouri
Cognitive Science (UC Davis)
Program: STARS
Project: Cross-Institutional Logging of Patient Data-sharing Consents on Blockchain Using Smart Contracts
Mentor: Tsung-Ting Kuo, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Naama Nunez
Sociology
Program: TRELS (Spring), Honors Program (Sociology)
Project: The relationship between familial socioeconomic status and children's experiences with COVID-19 induced online learning.
Mentor: Amy Binder, PhD
Conference Presentation: 2021 Undergraduate Research Conference

Amber O'Brien
Psychology
Program: Creating Scientists to Address Cancer Disparities
Project: Investigating the existence of disparities in quality of life among pediatric brain cancer survivors of low socioeconomic status
Mentors: Georgia Robins Sadler, PhD, Vanessa Malcarne, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference
William OFarrill  
*Biological Anthropology (SFSU)*  
**Program:** STARS  
**Project:** Vaccine Hesitancy  
**Mentor:** Amy Non, PhD  
**Award:** CSU Sally Casanova Pre-Doctoral Award

Mihaela Rascanu  
*Economics*  
**Program:** UC Scholars  
**Project:** The Impact of the Egyptian Government's Energy Reforms  
**Mentor:** James Rauch, PhD

Emma Scott  
*Sociology (Culture and Communication), Political Science (Data Analytics)*  
**Program:** TRELS (Summer), Honors Program (Sociology)  
**Project 1:** Memes and Misinformation during the 2020 US Presidential Election  
**Mentor:** Margaret Roberts, PhD  
**Project 2:** Lucrezia Marinella, Arcangela Tarabotti, and Artemisia Gentileschi: Diverging Social Spheres, Diverging Feminisms in Early Modern Italy  
**Mentors:** Harvey Goldman, PhD, Jeffrey Haydu, PhD  
**Conference Presentations:** 2021 UC San Diego Undergraduate Research Conference, 2021 UC San Diego Summer Research Conference

Veer Shah  
*Political Science, Anthropology*  
**Project:** Community Engagement & Social Media  
**Mentor:** Bonnie Kaiser, PhD

Sukham Sidhu  
*Economics*  
**Program:** TRELS (Summer)  
**Project:** California Punitive Damage Appeals: Award Reductions and Wealth  
**Mentor:** Kwai Ng, PhD  
**Conference Presentation:** 2021 UC San Diego Summer Research Conference

Haihan Tian  
*Economics, Data Analytics*  
**Program:** Honors Program (Economics), TRELS (Winter, Spring)  
**Project 1:** Studying Chinese People's Attitudes Toward America and Japan  
**Project 2:** Studying Chinese People's Choices on Smartphones  
**Mentor:** Eli Berman, PhD  
**Conference Presentation:** 2021 UC San Diego Undergraduate Research Conference
Alan Tram
Cognitive Science (Human Computer Interaction)
Program: TRELs (Fall, Summer)
Project 1: CAPS Redesign Project
Project 2: Co-Designing Digital Tools to Support Students' Social Challenges During and Beyond COVID-19
Mentor: Elizabeth Eikey, PhD
Conference Presentations: 2021 UC San Diego Undergraduate Research Conference, 2021 UC San Diego Summer Research Conference

Vianey Valdez
Human Developmental Sciences, Global Health
Program: TRELs (Summer)
Project: Identifying the Barriers UCSD Undergraduate Students Face in Obtaining Basic Needs Support
Mentor: Megumi Naoi, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Megan Wang
Psychology
Program: Honors Program (Psychology)
Project: Psych Honors Thesis
Mentor: Monica Sweet

Katrina Wanner
International Studies (Anthropology)
Program: TRELs (Summer)
Project: Climate Refugees and Accountability
Mentor: Nancy Postero, PhD
Conference Presentation: 2021 UC San Diego Summer Research Conference

Being a low-income student, having been awarded multiple TRELs awards allowed me to focus on advancing my academic prowess. As well as gaining ample experience toward graduate school and even my future career.
- Alan Tram
Justin Yang
*Cognitive Science, Mathematics*
**Program:** TRELS (Winter)
**Project:** Visual communication of object concepts at different levels of abstraction
**Mentor:** Judith Fan, PhD
**Conference Presentation:** 43rd Annual Meeting of the Cognitive Science Society, Underline Science Inc.

Alex Zhao
*Political Science (Data Analytics), History (Law)*
**Program:** McNair
**Project:** How A Public Health Crisis Reveals How Governance is Approached
**Mentor:** Kirk Bansak, PhD
**Conference Presentations:** 2021 UC San Diego Summer Research Conference, 2021 UC San Diego Online Undergraduate Research Symposium

Mai Yang
*General Linguistics, Cognitive Science (Language and Culture)*
**Program:** Linguistics Field Research Mentorship Program
**Project:** Northern Toussian Balafon Surrogate Language
**Mentors:** Emily Clem, PhD, Anthony Struthers-Young

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*I learned about how to do linguistics field research through doing transcriptions in Praat and ELAN. We analyzed the data we had and arranged them. I also learned more about the cultural, historical, and linguistic features of the language.* - Mai Yang