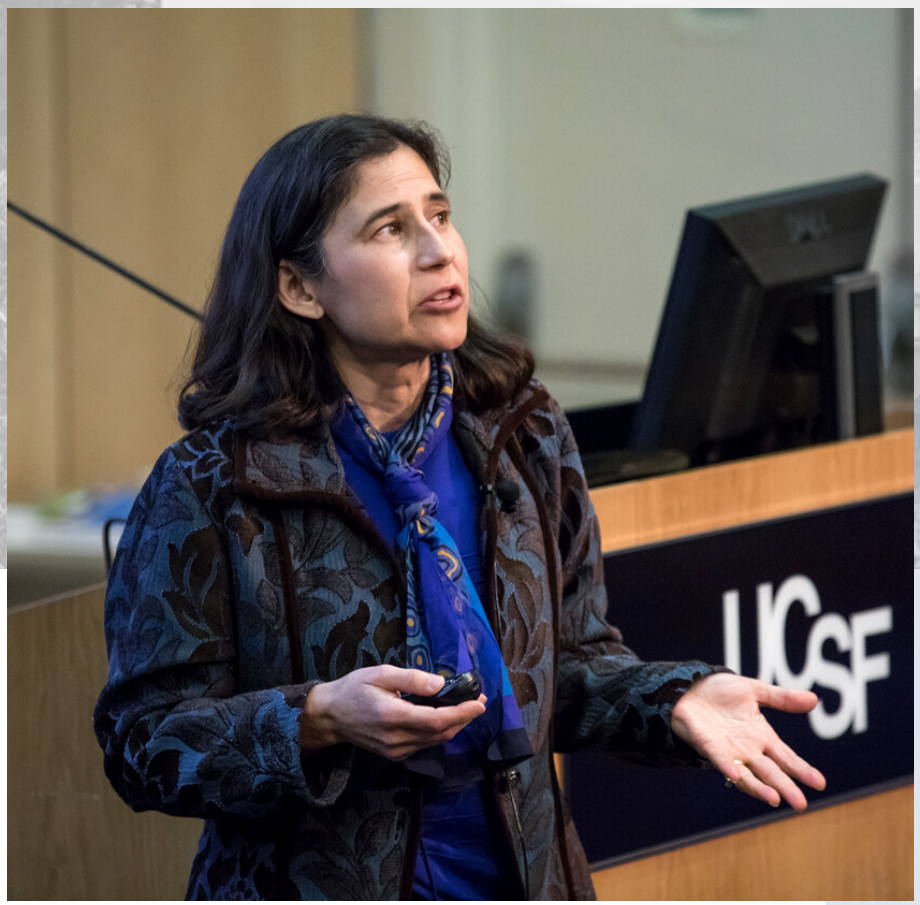
NSRG National Student Research Group
AADR American Association for Dental Research

ISSUE 5 | VOLUME 1 | FALL 2019

EXPLORATIONS

JOHN C. GREENE SOCIETY NEWSLETTER
FALL ISSUE 2019



Dr. Yvonne Kapila (*pictured above)* was one of the many speakers at Research and Clinical Excellence Day. Her talk focused on the link between our microbiome and oral diseases. Go to page 4 to see a list of the UCSF Summer Research Fellows, and go to page 6 for a recap of the award winners.

Inside This Issue

LETTER FROM THE PRESIDENT

Dear UCSF Dental Community:

I'm thrilled to welcome everyone to the start of another exciting and hopefully productive year! It is my great honor to write this letter as the president of John C. Greene Society (JGS) and I can't wait to continue working with my fantastic, dedicated board members who make this organization such a joy to be a part of.

Of course, this wouldn't be possible without all of the amazing students who sacrifice their time and energy to continue advancing our field. This year we had a record 27 summer research fellows. The diversity of topics and the dedication shown by the fellows to address each question was truly inspiring and highlighted the thriving research community at UCSF. I would like to extend my most sincere thanks to all of the people who made this day possible including Dr. Thomas Lang, the UCSF School of Dentistry's Associate Dean for Research; Dr. Sarah Knox, who served as co-chair for the Research & Clinical Excellence Day Committee; Dr. Lisa Berens, who served as Program Director for the Summer Research Fellowship Program; Roger Mraz, our Research Program Administrator; and our incredibly generous sponsors.

This year, we are committed to continue advocating research to as many students as possible. The Summer Research Fellowship is an amazing way to take advantage of the incredible resources available here at UCSF. We are dedicated to supporting as many students as we can in participating in this program because spending a summer working with an expert mentor to explore their own questions, learn how to conduct laboratory-focused or clinical research, and advance the knowledge of our field is an unparalleled opportunity

Sincerely,

Susan Keefe

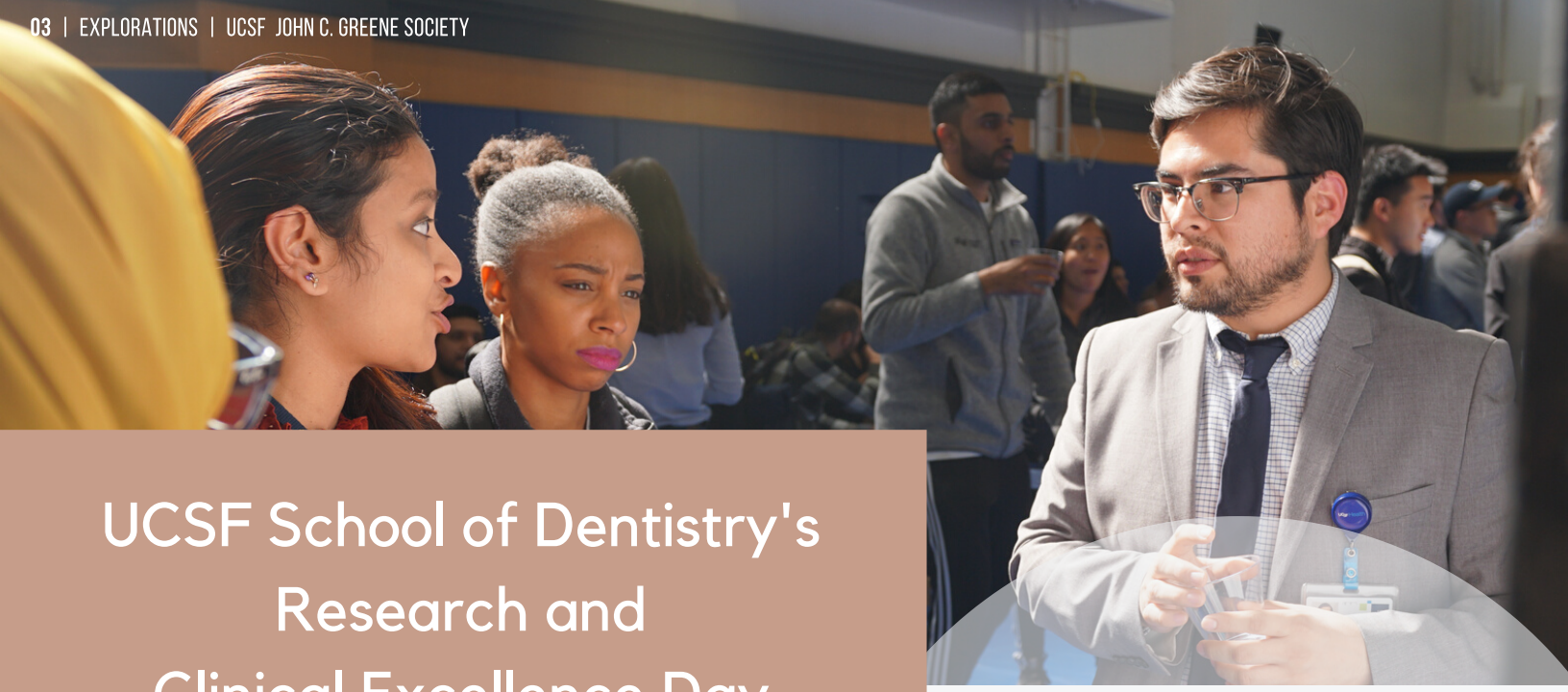
Susan Keefe

THE JOHN C. GREENE SOCIETY

The John C. Greene Society was founded in 2002 under the mentorship of Dr. John S. Greenspan and Dr. John C. Greene, whose leadership was instrumental to the dental school's rise to prominence as a premier research institution. A major goal was to encourage active student participation in meaningful research, bringing student research into alignment with the quality investigations being conducted by the UCSF dental faculty.

Since that time, the John C. Greene Society has grown into one of the most recognizable and respected student groups on campus. Student research participation at UCSF is at an all-time high, with dozens of students conducting fellowships each year, and many more traveling to present their findings at conferences across California, the country, and the world.

Top: Dr. Gurrinder Atwal discusses research with Navtinder Dillon '23 outside Cole Hall
Middle: Second year dental students ('22) Kendall DeKreek, Lori Martinez, Fady Ibrahim, and Zahur Subedar listening to a research poster presentation.
Bottom: Burin Thanasuwat '22 presenting his research project on TGF-β Signaling in cancers.



UCSF School of Dentistry's Research and Clinical Excellence Day

Every year, the entire UCSF School of Dentistry community participates in Research and Clinical Excellence Day. Here, UCSF students and research trainees present their findings to peers, faculty, and judges.

Presentation Award Recipients

Research Associate Category

1st: Margot Bacino (Mentor: Stefan Habelitz)

Predoctoral Category

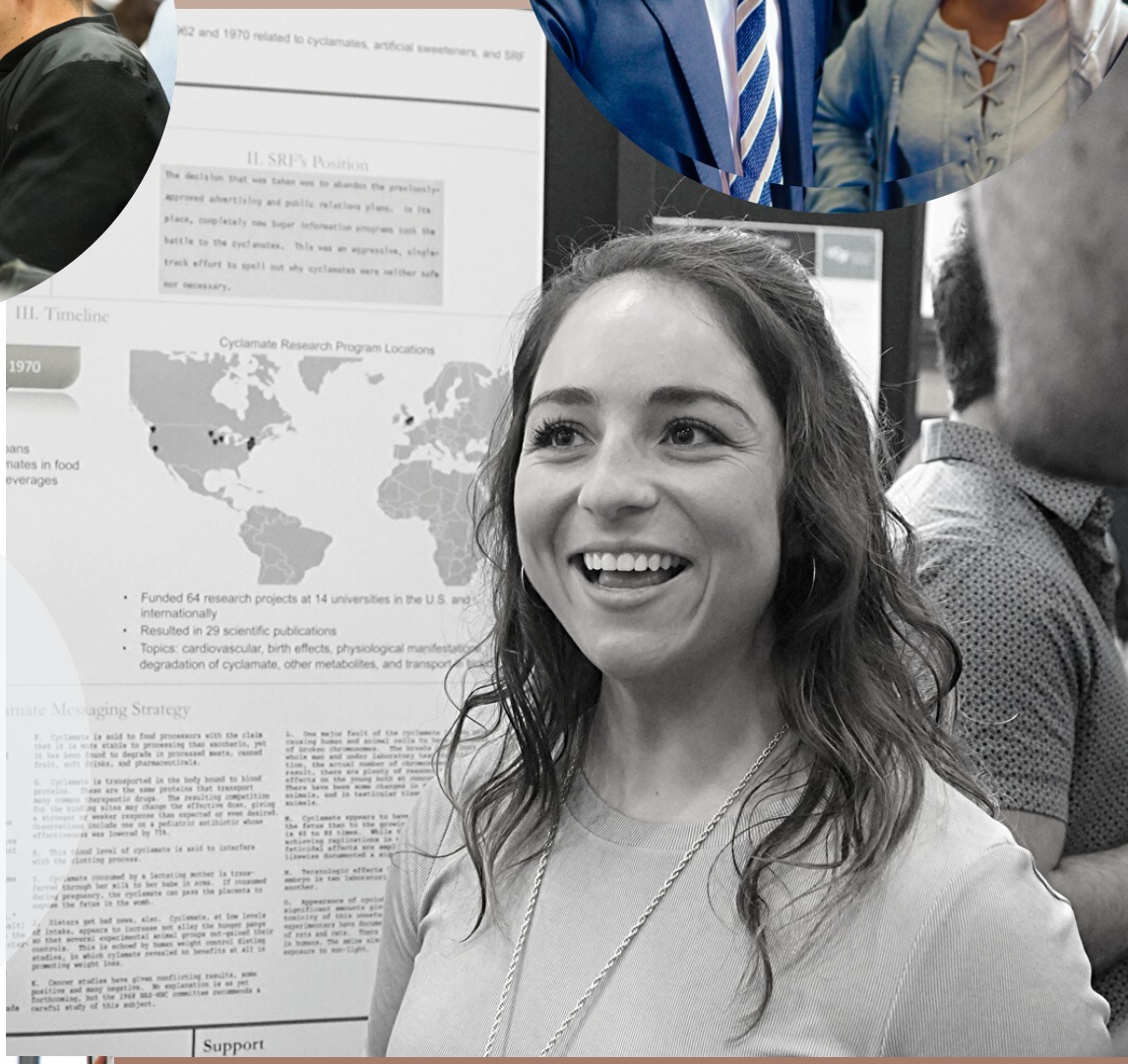
1st (Tie): Susan Keefe (Mentors: Drs. Ophir Klein & Amnon Sharir) & Brad Morgan (Mentor: Dr. Gwen Essex)
2nd: Burin Thanasuwat (Mentor: Dr. Diane Barber)
3rd (Tie): Mai Zong Her (Mentor: Dr. Kristen Hoeft) & Katie DiLeo (Mentor: Dr. Sarah Knox)

Graduate Category

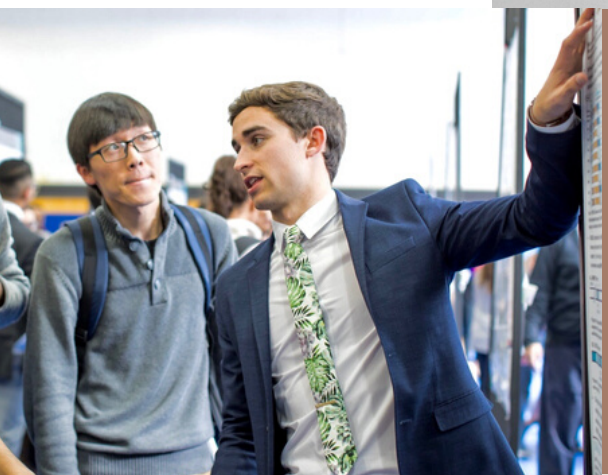
1st: An Nguyen (Mentor: Dr. Rich Schneider)
2nd: Lea Sedghi (Mentor: Dr. Yvonne Kapila)
3rd: Sean Ganther (Mentor: Dr. Yvonne Kapila)

Postdoctoral/Research Specialist/Visiting Scholar Category

1st: Yushi Bai (Mentor: Dr. Stefan Habelitz)
2nd: Ellie Babaie (Mentor: Dr. Stefan Habelitz)
3rd (Tie): Sepideh Banava (Mentor: Dr. Stuart Gansky) & Allan Radaic (Mentor: Dr. Yvonne Kapila)



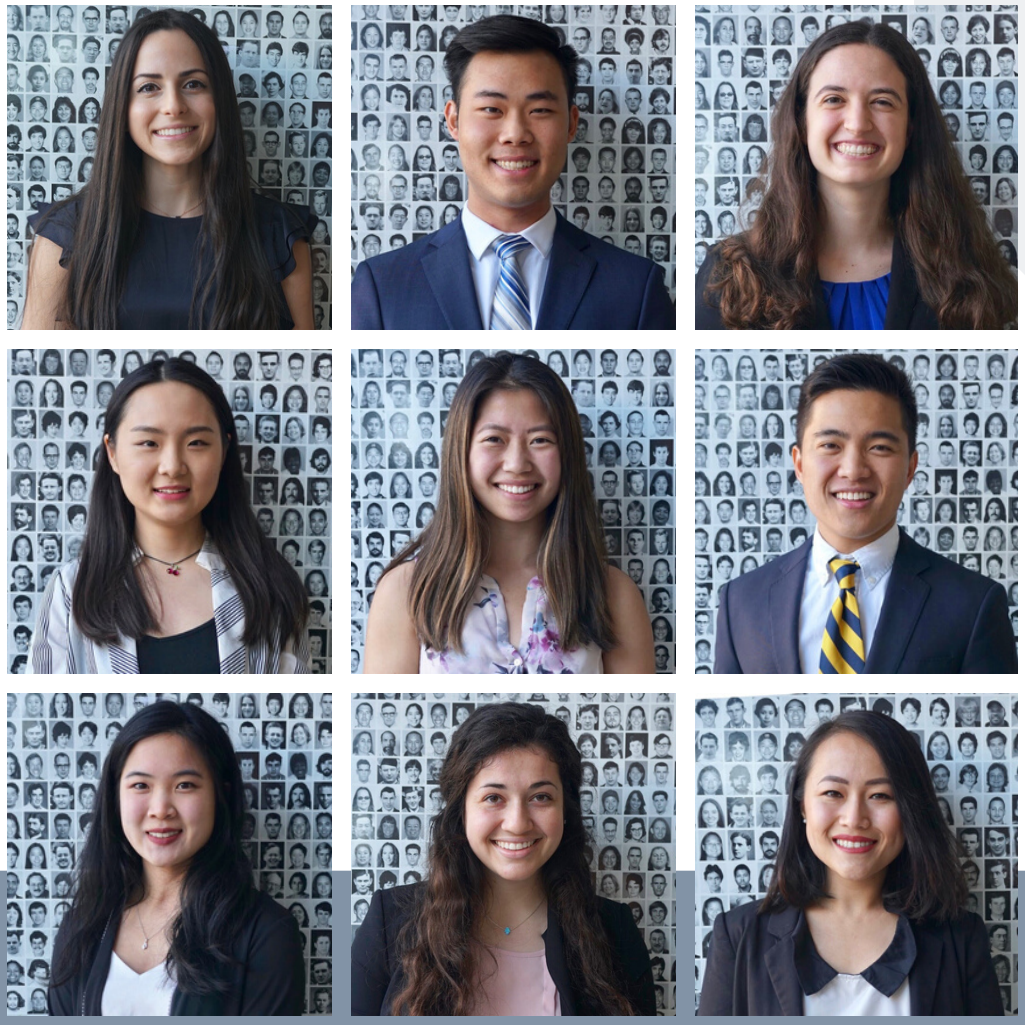
53 abstracts were submitted for this year's event: 34 in the predoctoral category, 8 graduate, 10 postdoctoral/research specialist/visiting scholars, and 1 clinical case



Top of previous page: Arturo Elias '21 presenting his work at Research and Clinical Excellence Day.
Top left: Eric Coy, Erin Walter, and Andrea Guido '23 listening attentively to an oral research presentation in Cole Hall.
Top right: Nick Hwang '22 explaining his research to Rebecca Kim '21.
Above: Kate Lovell '22 smiles as she shows off her research poster.
Left: Austen Lucena '22 explaining his work on the regulation of jaw length and bone resorption to Muuduu Otgonbold '23.

2019 Summer Fellowship
RESEARCH FELLOWS

Every year, the summer research fellowship selects students to spend ten weeks working with UCSF faculty members on research projects. Participants in the program take part in seminars, lectures, and social events to create a cohesive and supportive community. Here is a list of all the 2019 summer research fellows and their project titles!



Above: Kenneth Chang Chien '22 talks to Aaron Hui '20 about his research on oral cancer cells

Ronnel Azizollahi *(Dr. Sneha Oberoi) 3-D Analysis of Skeletal Expansion in Patients Using Invisalign Aligners vs Traditional Expanders*
Kenneth Chang Chien *(Dr. Ling Zhan) Effect of Antimicrobial Genes of Streptococci Mutans on Oral Cancer Cells*
Katie DiLeo *(Dr. Sarah Knox) Insulin-like Growth Factor Regulation of Salivary Gland Development*

Xin Fan *(Dr. Wu Li and Dr. Ling Zhan) Applications of Novel Amelogenin Peptides in Tooth Whitening by Bleaching*
Jenny Giao *(Dr. Stephen Connelly) Modulations of the ANS in PTSD Patients Treated for Chronic TMD with Botox*
Kevin Hahn *(Dr. Andrei Goga) Understanding Nerve-Cancer Cell Interactions in Perineural Invasion by Adenoid Cystic Carcinoma*

May Hao *(Dr. Elizabeth Mertz) Evaluating Dental Coverage and Access to Care for Older Adults in California*
Erica Harris *(Dr. Jeff Bush) Investigating the Role of A-Type Eph/Ephrin Signaling in Craniofacial Development*
Mai Zong Her *(Dr. Kristin Hoeft and Dr. Debbie Helsel) Dental Health, Alternative and Biomedical Care-Seeking: Ethnography in the Central Valley Hmong Community*

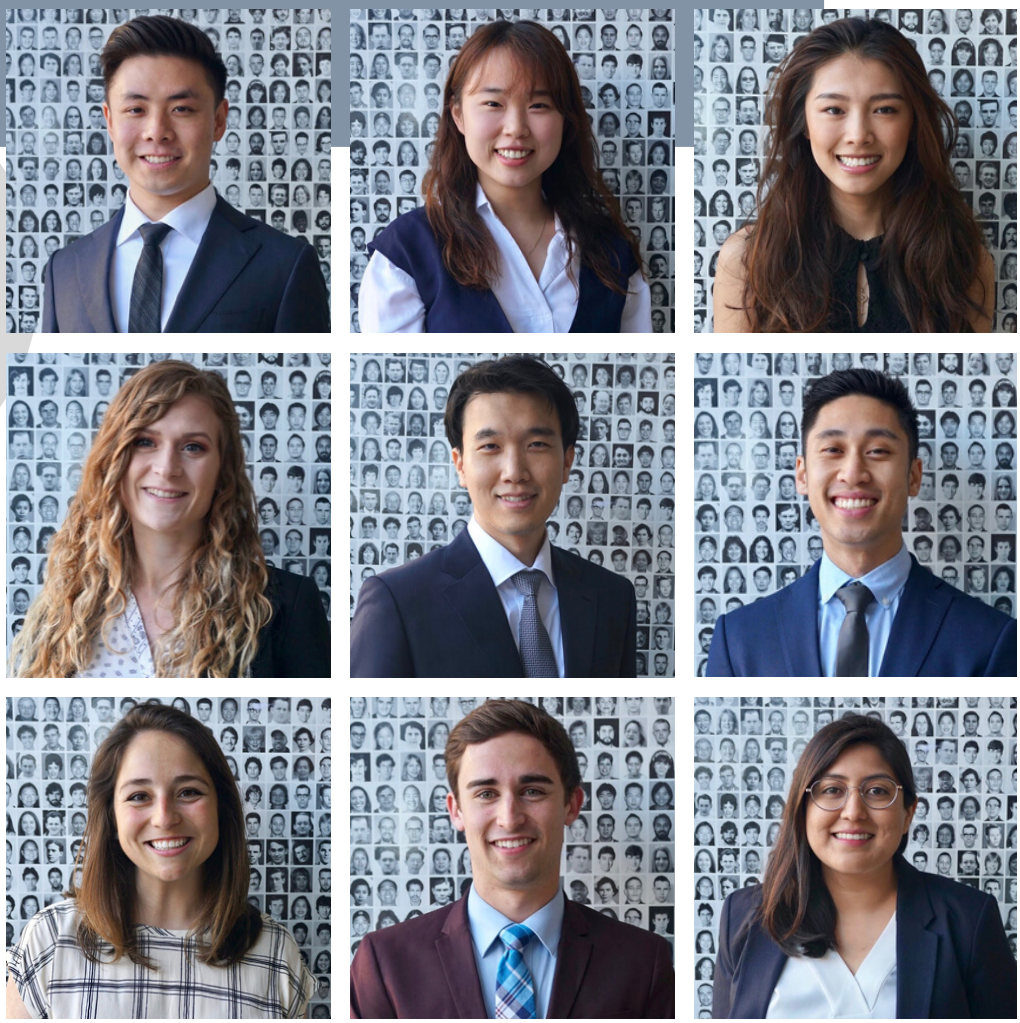
Nicholas Hwang *(Dr. Joel White) Assessing Data Quality from Caries Risk Indices Captured in Electronic Health Record*
Emma Kang *(Dr. Daniel Clark and Dr. Ralph Marcucio) The Role of Periostin in Bone Healing in Aging Populations*
Susan Keefe *(Dr. Ophir Klein) The Cellular Dynamics of Cranial Base Development in Costello Syndrome*

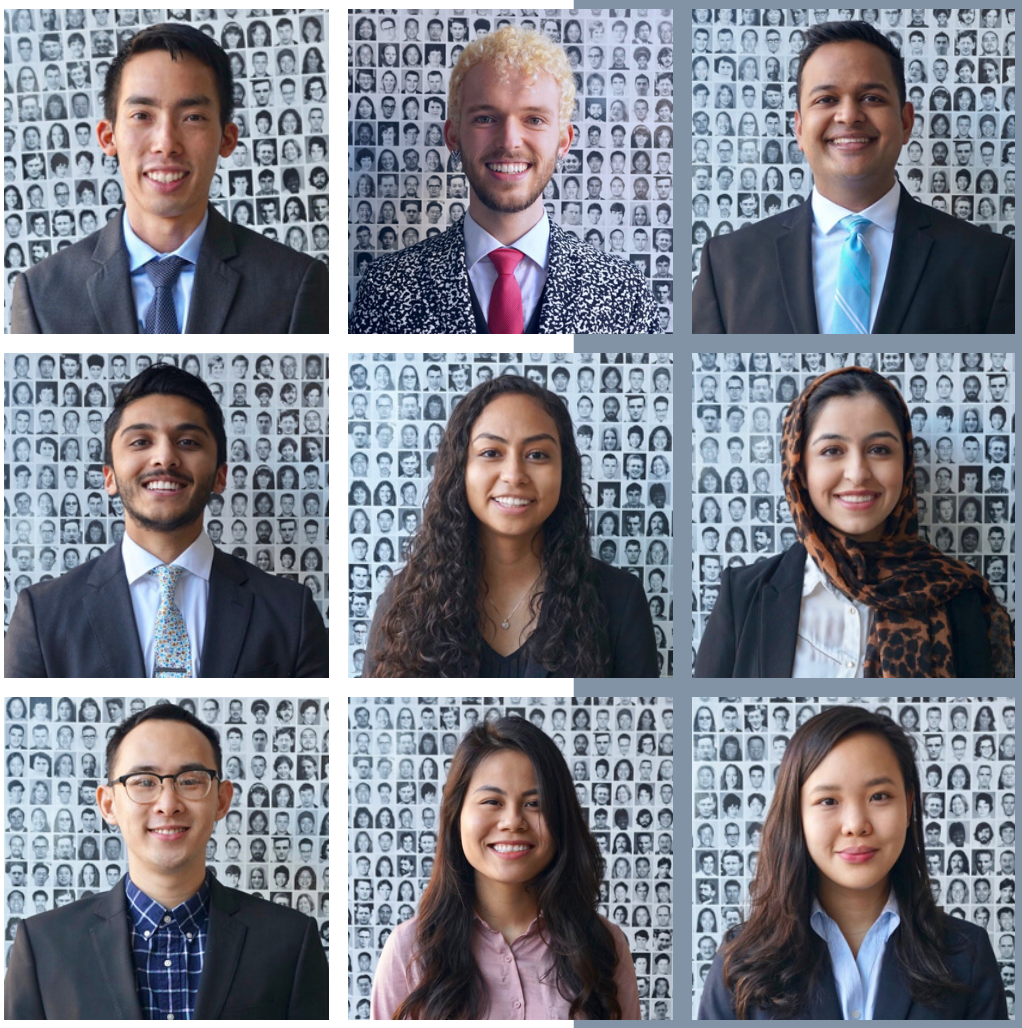
Talitha Khorasani *(Dr. Ann Lazar) Prevalence of Preventative Dental Care Among UCSF Dental Patients Who Receive Government Benefits and Barriers to Care*
Daniel Kim *(Dr. Sunita Ho) Functional Osseointegration of Dental Implants Using a Mouse Model*
Richard Le *(Dr. Rebeka Silva) Comparison of Patient Satisfaction and Efficacy of Splint Therapy Between a Direct-to-Consumer and a Dentist-Fitted Splint in Veterans with Bruxism*

Katherine Lovell *(Dr. Cristin Kearns) Sugar Industry Influence on Sugar Substitute Research: A Historical Analysis of Internal Documents*
Austen Lucena *(Dr. Rich Schneider) The Regulation of Jaw Length and Bone Resorption Mediated by TGF1 Signaling Pathway Through the Effects of Species-Specific RUNX2 Isoforms*
April Martinez *(Dr. Yvonne Kapila) In Vivo Effects of Antimicrobial Nisin on Host Inflammatory Response to Polymicrobial Infection in a Murine Model*

Right: Daniel Kim '22 and Merissa Ferrar '21 converse about research
Below: Susan Keefe '22 presents her poster to the judges

This year, there were 27 summer fellows, the most the program has ever had!

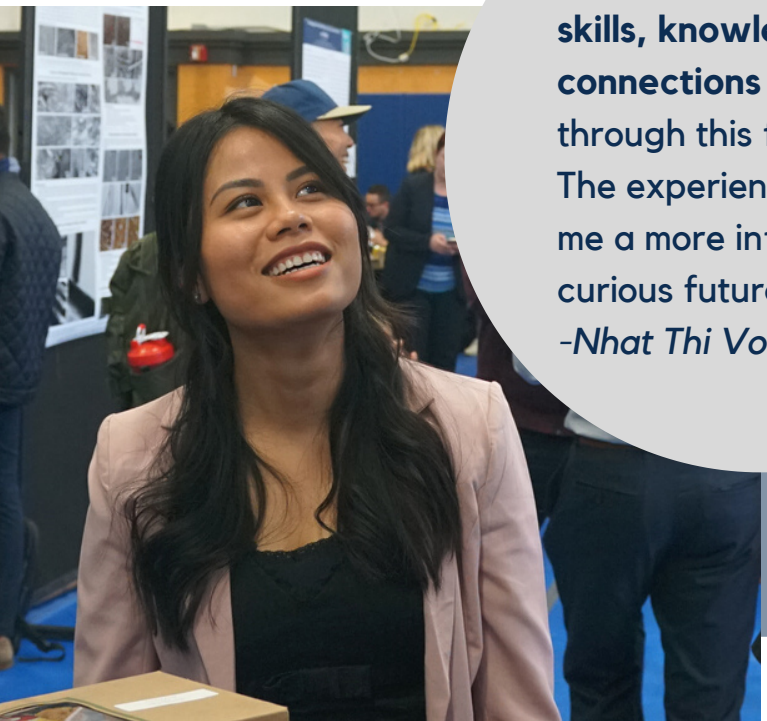




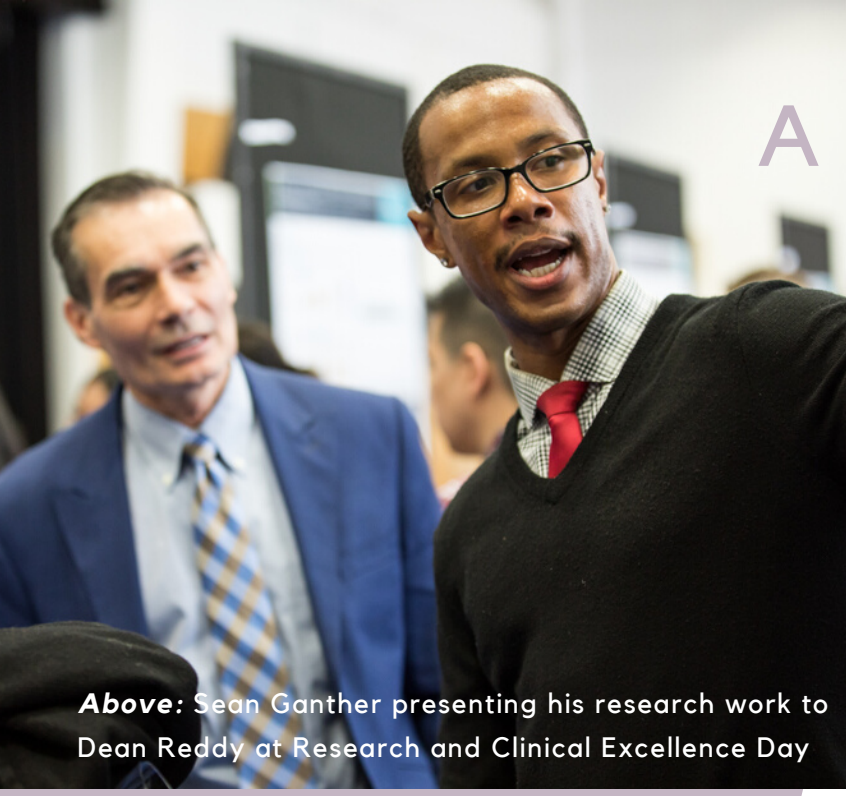
David Nguyen *(Dr. Stefan Habelitz) The Impact of Fluoride Ions on Remineralization of Dentin using Polymer-Induced Liquid-Precursor (PILP)*
Bradley Morgan *(Dr. Gwen Essex) Assessing Dental Students' Preparedness to Address Lesbian, Gay, Bisexual, Transgender, and Queer Health*
Elliot Pereira *(Dr. Shingo Kajimura) Transdifferentiation of Salivary Gland Epithelial Cells into Adipocytes and Adipocyte Healing Capabilities post Salivary Gland Injury*

Dilankumar Patel *(Dr.Wenhan Chang) Co-Administration of PTH with Calcimimetics to Increase Bone Mass of Alveolar Bone Leading to Decreased Rates of Tooth Loss*
Guadalupe Quintero *(Dr. Kristin Hoeft) Dental Treatment Comprehension and Dental Treatment Comprehension: An exploratory qualitative study Among Mexican-origin young adults in the United Sates*
Sara Soofian *(Dr. Jing Cheng) Social Determinants of Health, Dental Outcomes, and Return for Dental Care*

Burinratt Thanasuwat *(Dr. Diane Barber) Determining pH-dependence of the SMAD4-R361H Mutation Recurrent in Cancers for TGF-β Signaling*
Nhat-Thi Vo *(Dr. Alice Goodwin) The role of YAP/TAZ in the palatal shelf epithelium during palatogenesis*
Tsun-Shuan Wu *(Dr. Ben Chaffee) Associations of Household Rules and Parental Awareness to Youth Tobacco Use in the Population Assessment of Tobacco and Health (PATH) Study*



"I'm very grateful for the **skills, knowledge, and connections** I developed through this fellowship. The experience has made me a more informed and curious future *clinician.*
-Nhat Thi Vo '22"



Above: Sean Ganther presenting his research work to Dean Reddy at Research and Clinical Excellence Day

A Journey from *INSPIRATION* to INNOVATION

Sean Ganther is a 4th year dual degree DDS/PhD Candidate in the Oral Craniofacial Sciences program. He recounts his passion for music, his dedication to scientific discoveries, and his hopes to improve the future of healthcare.

Throughout elementary school and high school, I became very fixated on music as a career because of my grandfather. He was a professional jazz musician and largely inspired me to become a musician with hopes of becoming a movie score composer or direct a professional drumline. I auditioned for the LA philharmonic, despite being extremely young, and made multiple callbacks. It was my first love. But when I made the last callbacks, I had a pragmatic conversation with myself. Would music take me where I wanted to be and where I saw myself?

This was also around the same time my grandfather, the source of my music inspiration, passed from Alzheimer's disease.

I always had the thought of science in the back of my mind but didn't really have a solid reason to invest in it. But seeing my grandfather suffer from the symptoms the disease brings, I wanted to become familiar with all of its intricacies. I had so many questions. After finding out there was no cure, no treatment, and no medication to help mitigate the symptoms, I took my leap of faith and transitioned into science.

I transferred from community college into undergraduate and joined the lab of Nicole Bournias-Vardiabasis, which studies Alzheimer's disease. One project involved identifying holistic and natural molecules that helped with the neurodegenerative effects of Alzheimer's. Another involved characterizing cholinergic neurons and their role in Alzheimer's progressions. The last one utilized a model overexpressing insoluble peptides (AB1-42) in fruit flies in which we measured cognitive function, survival, microenvironmental pH and gene expression to delineate mechanisms underpinning the neurodegenerative disease progression from birth to death. This was my first exposure to research and Dr. Bournias set a really good scientific foundation. The initial step was to study Alzheimer's because of my grandfather, but the experience also exposed me to other branches of research.

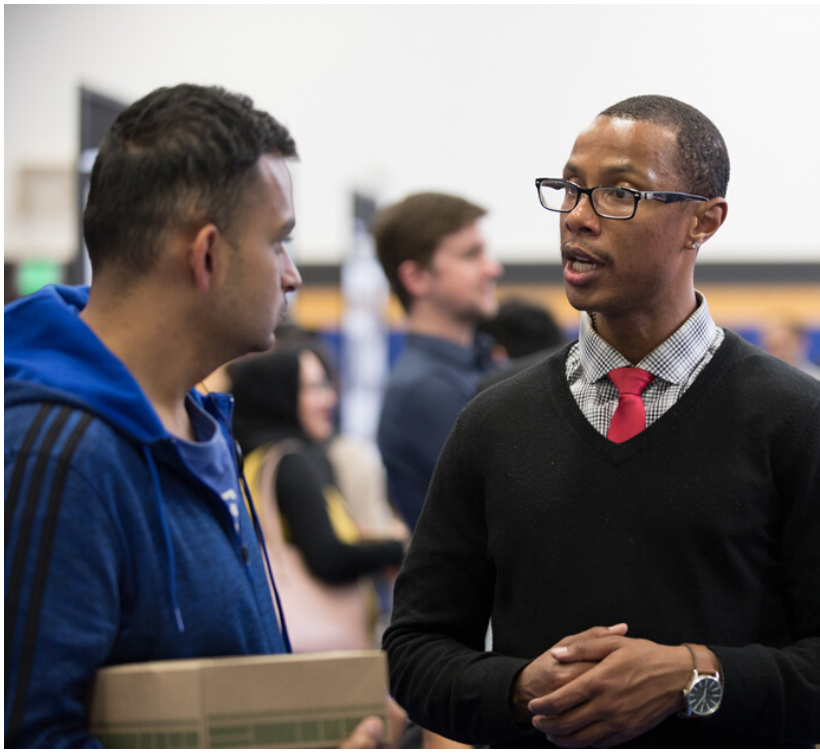
Through money from the California Institute of Regenerative Medicine, Dr. Bournias set up an internship at the Saban Research Institute at the University of Southern California. This was my first exposure in tissue engineering and stem cell research. With this project, I presented my first poster at the "Meeting of The Minds" research symposium which takes place at my undergraduate institution, California State University, San Bernardino. A culmination of all these experiences were drivers for me to continue pursuing research at the graduate level. These experiences exposed me to the high-level researchers such as Dr. Tracy Gricksheit, a world renowned tissue engineer. I learned a ton of fundamental knowledge of how science works, and became familiarized with experimental design, terms, and controls. These were all really positive experiences that I take with me wherever I go. The only downside to all this: commuting from the inland empire to LA every day.

As I was doing research in undergraduate, I was definitely more interested in learning about neurodegenerative disorders. But I always had an influence of dentistry as a young kid. Dr. Joseph Elmassian in Pasadena, California, took care of my whole family up until I was 14 years old and was more so a family friend. I began to look for as many clinical shadowing opportunities I could get my hands on ranging from general practitioners in the private and group practice setting, specialists, as well as seeing dentistry in the hospital setting. Through experiences, I found myself noting many problems and as a result, many questions followed. I became more curious about the state of dental research and if that was even a research focus to begin with.

I was quick to find that compared to medicine, dentistry was almost ten years behind in terms of our understanding of oral diseases. But dentistry, being tactile based and also having large patient interaction, became very appealing to me. The natural coalescing of knowing how to do research and an interest in dentistry, I found myself transitioning away from neurodegenerative diseases. This lead me to doing more research into DDS/PhD dual graduate programs in the first place. I wanted to see if there was a way to do clinical work and research at the same time. UCSF has always been one of those profound, cutting edge programs to me. My old principal investigator would always talk about how a lot of "sexy" stem cell research was consistently coming out of UCSF. After looking for programs that thrived in clinical excellence and also prioritized dental research, UCSF seemed like the natural choice.

Below: Sean Ganther explaining his research work to Helena Viets '23

After completing my rotations, I joined the lab of Dr. Yvonne Kapila, chair of the periodontics. I came to find that periodontitis, and its causative drivers, remain poorly understood. My research largely focuses on understanding the microbial-host interactions that occur between pathobionts and the human periodontal ligament, the organ responsible for maintaining the bone-tooth connection. Specifically, we study how a particular bacterium, Treponema denticola (a bacteria associated with advanced periodontitis), is able to modulate the transcriptional and protein output of genes associated with tissue destruction and remodeling. The long-term goal is to eventually generate epigenetic and gene regulatory network maps that allow us to identify novel drug targets with hopes of generating a new class of drugs that directly address these genetic and epigenetic factors that SDD's currently do not. Cis-regulatory elements (non-coding regions of DNA) regulate the function of numerous sets of genes. A paper in 2015 showed that by targeting one of these cis-regulatory elements associated with juvenile idiopathic arthritis, it brought these disease associated genes back to normal levels. This provided us with a proof-of-principle for our own disease context. Even though it is induced by bacteria, current literature has demonstrated that the host response is really the driver of this disease. From a basic sciences viewpoint, this is generating new insights into molecular mechanisms underpinning this disease progressions at the cellular and molecular levels. From a didactic viewpoint, it helps clinicians better understand how the disease is works with hopes that we will one day be able to integrate the knowledge in conjunction with innovative diagnostics into the clinic to provide doctors with more tools to better asses the status or activity of disease. From a translational perspective, I hope to use this data to generate drugs that treat these patients more efficaciously and prevent teeth from falling out.



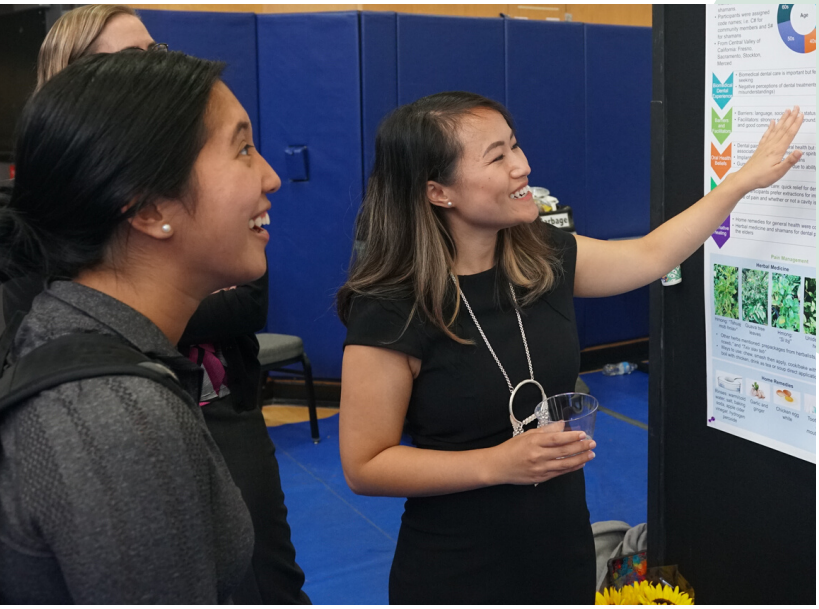
above: Sean Ganther discussing his work on the microbial-host interactions between pathobionts and the periodontal ligament

Looking back, my grandpa probably would be confused as to how I ended up here. But I think he would be proud none-the-less. His music provided me with a space to enhance and grow my imaginative capabilities. It also gave me an intellectual edge of thinking outside the realms of normality. Like most students, my path is very complicated. My grandfather's illness sparking an interest in science and research coupled with my childhood influences and shadowing opportunities leading me to dentistry have seemingly converged into a path that gives my life purpose and utility. The amalgamation of these distinctive life factors has had a marked influence on who I am and what I do today. My ambition will advance future generations by surpassing the ideas of past innovators in an attempt to further push the boundaries of science and medicine alike. Knowing one day that my efforts in the laboratory will surmount to a future of advancements in health care is an indescribable feeling.

Making a Difference: Mai Zong Her

We caught up with Mai Zong, an Albert Schweitzer Fellow and a UCSF Summer Research Fellow, on the community work she has been working on this past year

The Albert Schweitzer Fellowship is an interprofessional, nationally-recognized non-profit organization that prepares graduate students to more effectively tackle health disparities. The program immerses graduate students in a leadership development program, where they are tasked with designing and implementing a project that addresses the health needs in an underserved population.



Left: Mai Zong explaining her research to a wide-eyed Gabriella Galvez '22

Mai Zong was selected as a Schweitzer Fellow in March 2019, one of two projects being sponsored by the Fellowship from UCSF School of Dentistry this year. Mai Zong graduated from UC Berkeley, majoring in Integrative Biology and double minoring in Education and Global Poverty and Practice. This unique undergraduate experience challenges her to think more critically about addressing health inequities. For her Schweitzer project, Mai Zong returned to her roots: the Fresno community. She is partnering with First 5 Fresno's Glow! Program, a prenatal support program for low-income expectant mothers, to address childhood oral health disparities. This involves developing a dental curriculum, providing oral health education and screenings, and establishing partnerships within the Central Valley to improve dental service referral systems and access to dental care. As part of the curriculum, she taught expecting mothers about baby teeth, oral hygiene, maternity oral health, and Medi-Cal coverage for dental services. She also obtained a few donations from generous friends and family to put together care kits that contained helpful items for a child's first 5 years of life, such as baby finger brushes, children's floss, and tooth tissues. Since the start of Fall quarter, she has expanded her partnerships beyond First 5 Fresno and is also exploring new project ideas with the perinatal department at UCSF Fresno and other non-profit organizations to address the dental health needs of the underserved in Fresno. She is continuing to build and strengthen these relationships to help connect underserved members of the community to dental care services that they can afford.

As a UCSF Summer Research Fellow, Mai Zong again decided to focus on Fresno's underserved communities. Mai Zong designed her project around the Fresno Hmong community, one of the largest Hmong communities in the US. Hmong Americans are a Southeast Asian minority group in the United States, making up only 0.08% of the country's population. Both of Mai Zong's parents are traditional healers, a role that is integral to the culture's identity and belief. But despite its importance, not much is known about Hmong traditional medicine in relation to oral health, and very little research has been done on the community's oral health status.

"I grew up in a home where my parents are traditional healers. My dad was a shaman and my mom is an expert on herbal medicine. So growing up, whenever I had toothaches, my mom would give me bitter leaves to chew on. It does relieve the pain, but I remember I would peek in the mirror and I could still see the deep, dark cavities in my teeth. I have always been curious as to what these herbal medicines are. Do they actually work? Does my community still use them? This is what sparked my interest to look into alternative healing in the Hmong community." -*Mai Zong Her*

Mai Zong's goal is to ultimately improve the oral health status of Hmong Americans; she wanted to begin by first bettering her own understanding of the challenges within this community. She sought out the mentorship of Dr. Kristin Hoeft, who has had extensive qualitative research experience in underserved communities, as well as Dr. Deborah Helsel, a sociologist who has greatly studied Hmong culture and shamans, to guide her project.

"I had no experience in qualitative research so Dr. Hoeft helped me with the research design. I also learned how to put my data into perspective and how to connect with the people in the community that I am learning about."

Mai Zong recruited participants across the Central Valley to interview them about their dental care experiences and oral health beliefs. She asked open-ended questions about the participant's experiences with oral diseases and dental care, letting them describe their situations from their own perspectives and in their own words.

Mai Zong conducted 22 interviews, then carefully listened to each recording to translate the Hmong interviews and transcribe the English interviews. Due to the intricacies of the Hmong language, each interview could take her 4-5 hours to translate and transcribe. Using Dedoose, she then tagged significant sentences to a topic/code, labeling the experiences or barriers that participants shared. Finally, she extracted the data to analyze for emerging trends and major themes.

This project is the first of its kind: an effort to understand the interplay between the Hmong people's oral health beliefs and the community's care-seeking behaviors. Mai Zong's study showed that the use of traditional medicine in this community is commonplace, oftentimes as a substitute for biomedical dental care. Ingrained cultural beliefs and the lack of accessible dental care growing up are also factors that turn Hmong Americans to traditional healing instead of seeking the advice of a dental professional.

The elders believe that the way you came should be the way that you leave. If you have anything that is foreign in your body, it may negatively affect the reincarnation process and your family.

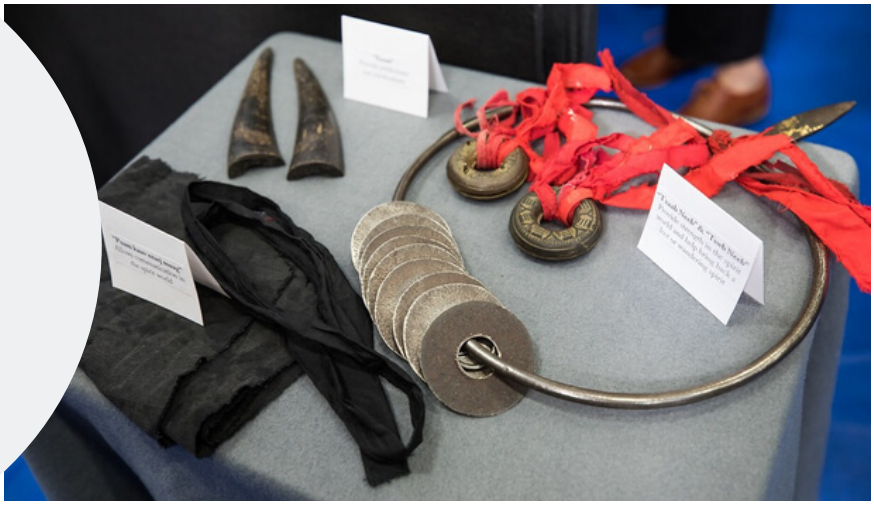
Even though the younger generations are becoming more receptive to biomedical dental care, there are still many barriers in the social environment, regarding oral health beliefs, and in accessing quality dental care. All of these are obstacles that negatively impact health outcomes.

"Most believe that biomedical dental care is important, but they did not grow up going to the dentist regularly. So they may not seek out dental care until they are experiencing pain."

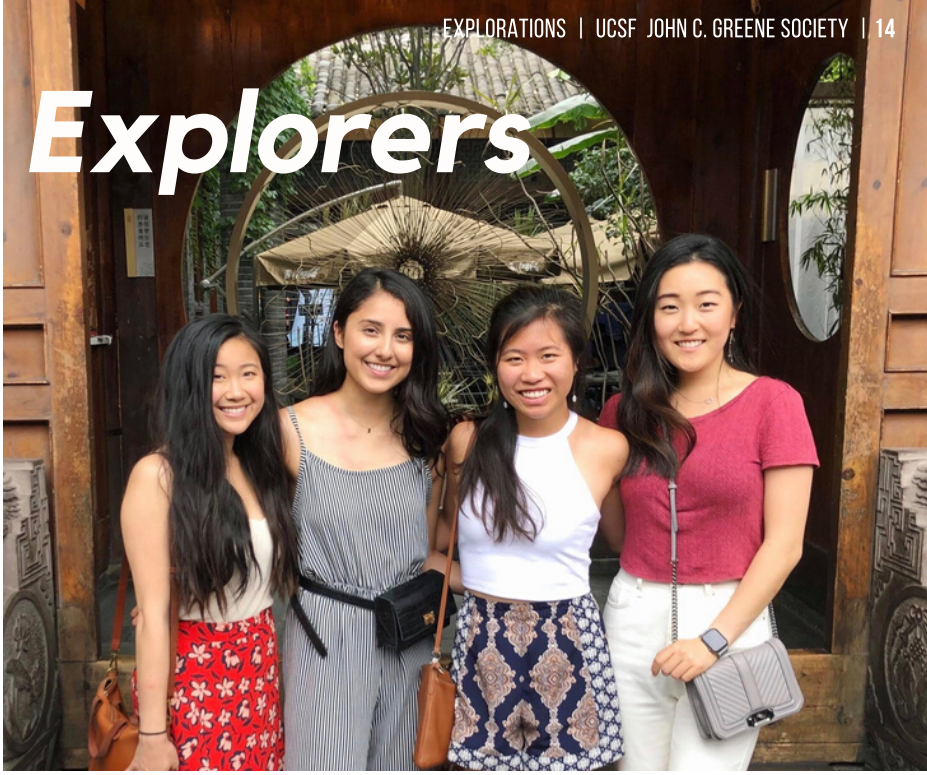
There are a lot of challenges unique to the Hmong community. Although Mai Zong's Summer Research Fellowship project has come to a close, there is still much to be done. She is working on the manuscript while continuing her Schweitzer Fellowship in oral health disparities alleviation in the Fresno community. Every community has its unique needs, and it's important to listen to those you are helping before diving in. Mai Zong's next focus will be figuring out how to begin a dialogue about oral health in the Hmong community and the role of biomedical dental care. She hopes to continue working on measures to alleviate oral health disparities and empower her community through community outreach and oral health education.

"When working with these communities, it's important to embrace them. You become one of them. You should never go into a community dictating how you want to help. You should go in asking 'how can we help?' We can do a lot of good for a community. But we can also negatively impact them if we are not constantly reflecting on the work that we are doing and whether or not it's sustainable."

Below: Traditional tools used by Hmong shamans during ceremonies and rituals.



Exchanging Explorers



West China School of Stomatology (WCSS) International Exchange Camp aims to bring together dental students worldwide to stimulate participants' global awareness and inter-cultural communication

Four first-year students: (from left to right) Theresa Bui, Lori Martinez, Joanne Hong, and Hanna Kim, were selected to attend this two week immersion.

Why did you decide to attend this program?

Lori Martinez: I've been doing global health outreach since I was in undergrad, but I applied to the West China School of Stomatology (WCSS) program because it seemed like an opportunity to become educated about the global impact of oral health inequities and different health systems. I knew that the dental program at the WCSS was vastly different than our program at UCSF and I was excited to learn about a new culture and city.

Hanna Kim: As a public health major in undergrad, I had always been interested in public and global health, and thought this would be a great opportunity to immerse myself in a more dentistry-focused, global health environment. During my first-year at UCSF, I took the Global and Oral Health Seminar with Dr. Chaffee, through which I was able to deepen my understanding of public health. We read numerous papers that not only solidified the basics of global oral health, but also stimulated an overall awareness of the disparities that surround oral health internationally and the need for more action. Thus, I applied to this program in an effort to seek healthcare improvement through collaboration and learning from faculty and dental students around the world.

What is one of the highlights of this program?

Theresa Bui: Although there were many highlights in attending this program, the one that stood out are the relationships we developed with our Chinese host students. Not only did these students help translate and guide us around China, they were our friends and colleagues. While traveling around China and during breaks between classes, there were plenty of opportunities to have meaningful and thought-provoking conversations. We were able to discuss a wide variety of topics - some of my favorite pertained to: understanding Chinese culture, the differences between our education systems, and how dental care is delivered in China. On top of that, our host students were happy to answer questions about the research they conducted at the university. It was incredible to observe the types of research that are taking place from across the world.

What are some new things you saw through the summer international program?

LR: We competed in an international dental competition which involved knitting, CPR, impressions, drawing tooth morphology, and utilizing a stimulation typodont (called a MOOG Simodont). We spent a couple of hours trying to regain our motor skills by doing crowns- it was super productive because the machine can give you immediate feedback and you didn't have to go downstairs to buy new teeth when you mess up. During the second week we saw that they had unique clinics throughout the hospital like Traditional Chinese Medicine, Digital Orthodontic Clinics and a Microdentistry Clinic. We got to tour their dental museum and saw old dental instruments as well as clay models that were commissioned by Buddhists to teach students about dental anomalies and diseases many years ago.

HK: The school took us on a field trip to the Chengdu Research Base of Giant Panda Breeding, where we got to see the nation's largest panda reserve filled with lounging pandas, infant pandas, and even red pandas. This was an amazing experience that is so unique to Chengdu, China and I'm very thankful that the school arranged for us to go.

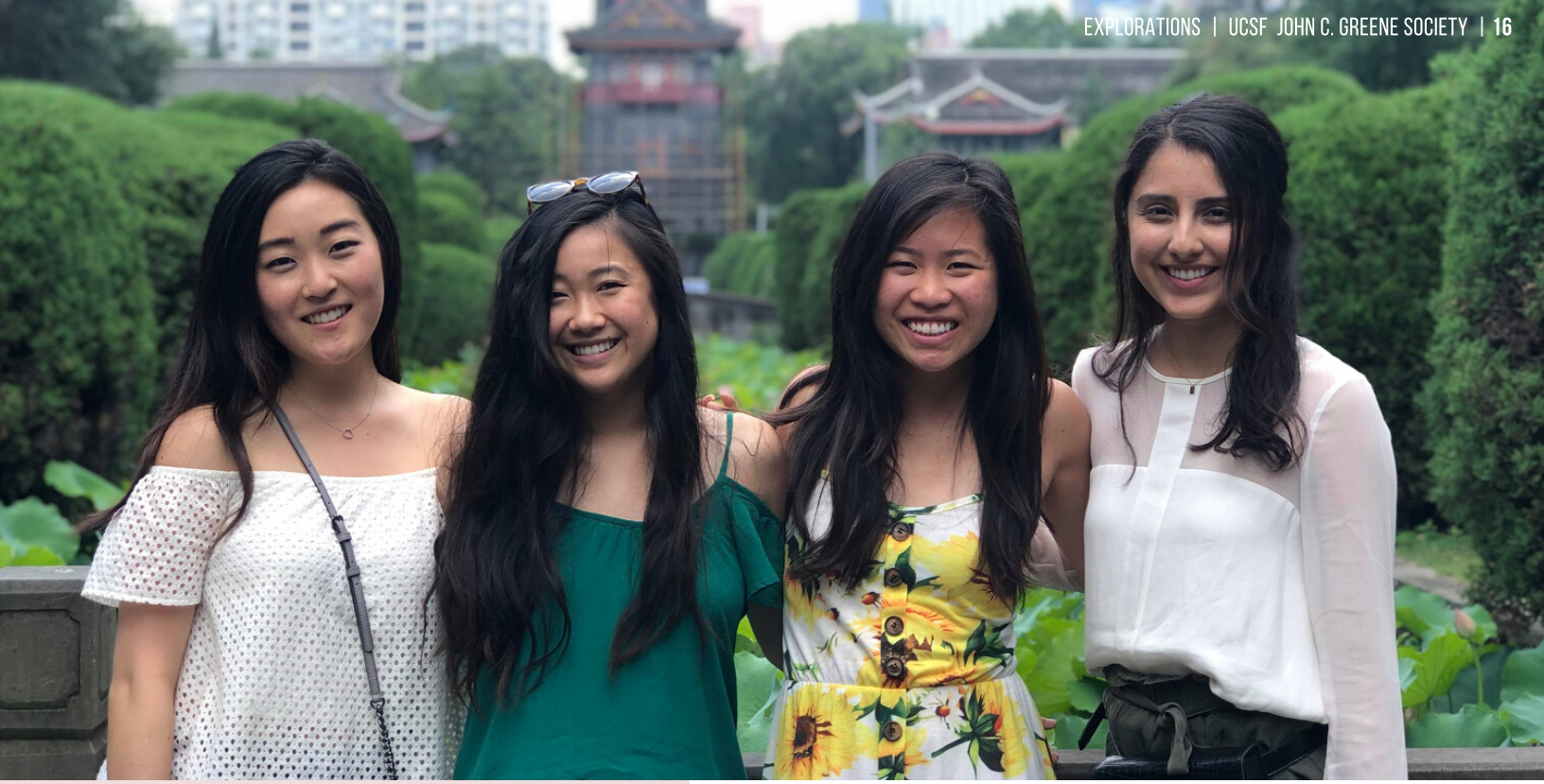
Joanne Hong: WCSS uses virtual reality to practice drilling. Its advanced technology shows that there are various methods around the world to prepare for clinic.

Left: Joanne Hong, Lori Martinez, Theresa Bui, and Hanna Kim at the clinic of West China School of Stomatology, Sichuan University

Top of Next Page: Hanna Kim, Theresa Bui, Joanne Hong, and Lori Martinez standing outside the West China School of Stomatology

How has this program further enriched your experience as a dental student?

HK: We got the opportunity to interact with students from other countries that spoke so favorably about the American dental educational system and made me appreciate how many opportunities we have. After a really intense first year of school, I came back to San Francisco ready to learn and inspired to conduct research that I was passionate about.



How is the dental education system in China different from the system in America?

LM: The dental education system in China was far more integrated with medical programs that ours is. The students explained that their biomedical science courses are taken as if they were medical students, they complete rotations in hospitals alongside medical students, and then begin working in Simulation Labs later on in their program. They are also expected to complete research projects in order to graduate and many of them work really long hours in their labs, alongside studying for their didactic courses.

TB: The West China School of Stomatology held an international hand skills competition that consists of 6 different activities to test manual dexterity. From knitting to taking alginate impressions, students from all around the world competed against one another. This emphasized an important aspect of China's dental education system- competition. It is very common for Chinese dental students to participate in academic competitions between different dental schools. It is my understanding that this culture pushes their students to better their own performance and prepare them for real-life work force. Although American dental schools adopt the ranking system, China's dental education system more-so encourages high performance and measures success through competition.

HK: We attended a couple of lectures about public health during our first week of the program. The lecturer was a guest from Harvard, and taught us about cultural sensitivity, cultural humility, and other aspects of public health. We also attended a couple lectures about biomaterials during our program. The dental education system in China is set up completely differently from ours. The students don't attend an undergraduate university, and instead go straight to dental school. Thus they inevitably have a lot more experience in the dental field by the time they graduate than students in the US do. I was also impressed because all the students of the Chengdu School of Stomatology were required to publish two research papers, which further spoke to their deep academic involvement within the dental field.

Top: *Nick Hwang, Helena Viets, Muuduu Otgonbold, David Nguyen, Susan Keefe, Erin Malone, Katie DiLeo, Nhat-Thi Vo*

Bottom: *Burinratt Thanasuwat, Wesley Kao, Stephanie Ellman, Annie Nguyen, Tiffany Huang, Sarah Anne Wong, Eric Lee, Kenneth Chang*

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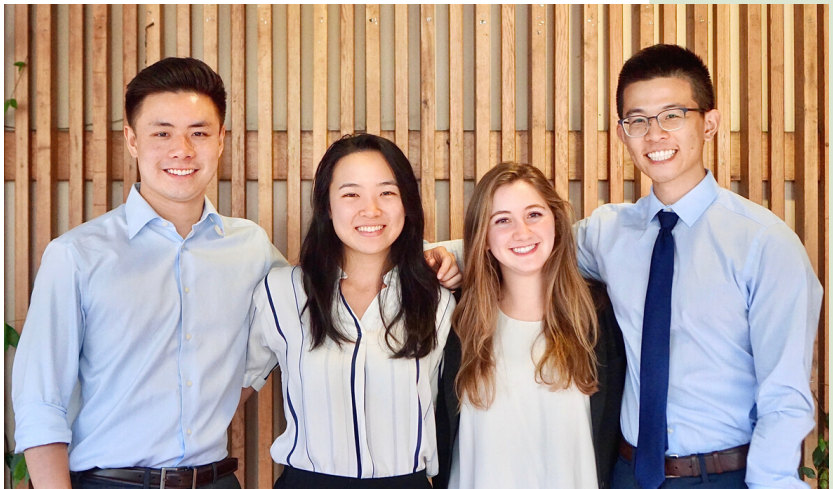

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Newsletter Editor Notes

The UCSF JGS Newsletter Team welcomes Stephanie Ellman '23 and Tiffany Huang '23. With a passion for writing, design, and research, Stephanie and Tiffany will definitely help improve the newsletter and we are ecstatic to have them on the team.

The goal of this issue was to highlight Research and Clinical Excellence Day and the UCSF Global Oral Health trip to China. We hope to continue to share the great opportunities and accomplishments going on at UCSF. If you have any questions or are interested, please email JGS@ucsf.edu.

Sincerely,
JGS 2019-20 Newsletter Editors in Chief
Nick Hwang (Nicholas.Hwang@ucsf.edu)
Eric Lee (EricD.Lee@ucsf.edu)