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THE PRE-DENTAL SOCIETY AT UC BERKELEY PRESENTS...

# The Pre-Dental Press

— Established 1959 —



Cal PDS welcomes new members at the Fall Retreat. See page 2.



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Learn more about our Dental Education Outreach Program. See page 10.



Meet the 2018-19 officers! See page 6.

## Letter from the Editors

Welcome to our 2018 Pre-Dental Press! We are Chelsea and Lauren and we are the Publicity Officers for the 2018-2019 school year. We are so excited to share our new volume of publications with you! We had an awesome semester full of fun bonding events, community service and welcoming many new faces into our Pre-Dental Society! We hope you can see how much fun we had this semester by reading this issue!





## Starting off the Semester with Retreat

By Eve Zhong

On September 15, Cal Pre-Dental Society (PDS) segued into Fall 2018 with its semiannual Member's Retreat at the Valley Life Sciences Building (VLSB) lawn on a crisp, sunny Saturday morning. Organized by Internal officers Albert Samson and Arjen Aquino, Member's Retreat takes place at the beginning of each semester to familiarize new PDS members with the PDS community as well as establish stronger bonds with existing members. Through fun and ridiculous activities, PDS members expose the raucous side of their otherwise intense, hardworking, "prehealth-student-at-Berkeley" personality.

The retreat began with an icebreaker game to allow members to learn each other's names. Essentially, a leader would stand in the middle of a circle and point to someone, who would duck. The people on either side of the person would say the other's name, and the one who succeeded in saying it first would stay in the circle, while the other would be "out"; this game would continue until there were 2 people remaining. This game helped facilitate social comfort, foster a healthy sense of competition, and it forced members to be hypervigilant in learning each other's names.

Then, members were divided into 7 "families", where they had to come up with a family name to call themselves for the rest of the year. They also had to create a chant to represent them, many of which were full of terrible, yet admittedly-clever dental puns. These names included but were not limited to "Invisalign-backers", "The Crowns", and "Gummy Bears". The team with the best cheer, determined at Albert and Arjen's discretion, was permitted an advantage in the following game.

The next game was a race consisting of a series of excruciatingly difficult tasks. Four members of each family had to use their craniofacial muscles to move an Oreo from the top of their forehead to their mouth without it falling on the ground, spin 10 times, then attempt to run to a bottle placed about 25 meters away, successfully flip it, and run back. The chaos that ensued was absolutely entertaining; people contorted their faces in the weirdest ways only to have the cursed cookie inevitably slide off, no one could seem to run in a straight line, and bottle-flipping was nearly impossible on the uneven, grassy VLSB hill. Getting people to make fools of themselves was an ingenious bonding tactic.

After that, the Dental Education Outreach Program (DEOP) coordinators Betty Birbo and Chris Lee held a DEOP workshop, in which they trained PDS members to sing the Dental Sing-Along Song, as well as introduced them to MyPlate, a food pyramid visual, and the two toothy characters, Tina the Tiger and Leo the Lion. This would prepare them for future DEOP events, where they would raise awareness about the importance of oral health to youth in the community.

After the eventful three hours, members had pizza for lunch, the perfect conclusion to a dynamic morning. People socialized and talked about their dental hopes and dreams, letting them solidify their friendships before bidding their final farewells. All in all, this year's Member's Retreat was a unique and effective way to unite new and old PDS members and foster a sense of community and amity.

Most importantly, thank you to the internal officers for organizing such a lovely event!

## Review of Study: Oxidative stress in the oral cavity is driven by individual-specific bacterial communities

By Chelsea Huynh

In a study led by Mária Džunková at the Foundation for the Promotion of Health and Biomedical Research of Valencia Region, Spain, it was found that there was significant variation in oral bacterial species between 26 volunteers in over a one month span. They used chemical markers of oxidative stress in the subjects' saliva to determine the presence of pathogenic bacteria. It was found that differences in oxidative stress levels were associated with differences in bacterial combinations in their oral cavity. *Streptococcus mutans*, a strain of bacteria largely associated with caries, demonstrated the most significant correlation with the oxidative stress markers; however, not all of the data from the volunteers showed this correlation. Current research shows that oral diseases are not due to a single pathogen but rather a combination of bacteria, including a person's oral microbiome; therefore, there is no consensus of what bacteria is largely responsible for every oral disease. Given that a higher oxidative stress level in saliva was found amongst people with caries or periodontitis, the variation of bacteria communities in individuals' oral cavities may be associated with differing levels of oxidative stress levels in the saliva of individuals.

Source:

<https://www.nature.com/articles/s41522-018-0072-3>

Image courtesy of [https://smart.servier.com/smart\\_image/oral-cavity/](https://smart.servier.com/smart_image/oral-cavity/)

# Member Spotlight

## Why I am Pursuing Dentistry

By Autumn Lee



This past summer, I shadowed two incredible dentists that practice near my hometown. At the time, I was not yet 100% set on dentistry, but after the couple of months of observing Dr. Yip and Dr. Galera in the bay area, I decided that dentistry is something I am serious about pursuing. I decided to reach out to these specific dentists because they are both excellent female dentists of color with fabulous reputations. According to the American Dental Association (ADA), only 31% of dentists are women, and a mere 25.8% of practicing dentists are people of color, which means that statistically, roughly 7.99% of dentists are women of color. Dr. Yip and Dr. Galera both spoke to me about their struggle in graduate school, experiencing feelings of discrimination as a minority, both as a woman and as a person of color, but explained that if you're passionate enough about becoming a dentist, it's possible for anyone to achieve that dream job despite impediments. These days, schools like the University of California, San Francisco (both doctors I shadowed graduated from this dental school) are working to increase the number of dental professionals that originate from underrepresented minority groups.

Over the summer, while I was shadowing these two dentists 3 or 4 days a week, I wore black scrubs and took notes on their techniques and advice they gave me. Dr. Yip was particularly interesting to shadow, as she herself was once an educator at UCSF. She explained in extreme detail exactly what she was doing and why, which I found extremely helpful. I'm a very visual learner and seeing the procedure done in front of me in real time was wamazing. A few rather well known scientists, one might say "nobel laureates" are patients at her private practice and I couldn't believe it when a very well known scientist walked in needing a broken tooth fixed. She treated him like any other patient, with respect and patience. Likewise, Dr. Galera was very selfless and caring toward her patients. To lessen the worry of many of her patients, she simply explained to them what she was doing. Giving them a mirror to watch their procedure, she explained what she was about to do before she did it. Dr. Galera explained to me that the more informed the patients are, the less scared they are. A lot of people are afraid of the unknown.

The experience of shadowing a dentist is so enlightening, interesting and FUN, and I would recommend it to anyone even considering dentistry as a possible career path. Upon acceptance into UC Berkeley, I knew I wanted to attend graduate school in a health profession of some sort. I looked into dental school, medical school, optometry school, and even considered pursuing physical or occupational therapy. However, after spending my summer observing and learning from those two incredible women, I decided that one day I could do what they do on a daily basis, and I am now on track to complete the prerequisites for dental school and will start studying for the Dental Admission Test (DAT) next year.



# Soap Carving Social

By CHELSEA HUYNH

Cal Pre-Dental Society members gathered to polish their manual dexterity skills during a soap carving social on Oct. 10. At the start of the social, community service officer and senior Ben Bright enlightened members as he shared his experience carving a bar of soap into an eraser during one of his dental school interviews. The room was filled with a fragrant aroma as members carved into their soaps, leaving behind a mountain of soap dust on their desks.



# MEET THE OFFICERS

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VICE PRESIDENT



Brian Lee, 4th

DEOP



Chris Lee, 3rd

DEOP



Betty Birbo, 3rd

FINANCE



Brandon Azali, 3rd

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Austin Nguyen, 2nd

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Arjen Aquino, 3rd

INTERNAL



Albert Samson, 4th

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COMMUNITY SERVICE



Sunny Bai, 4th

COMMUNITY SERVICE



Ben Bright, 4th

WEBMASTER



Christopher Hailey, 3rd

PUBLICITY



Lauren Hotseung, 2nd

PUBLICITY



Chelsea Huynh, 3rd

# THE Modern Toothbrush

Written by Eve Zhong

As of January 2015, Oral-B released a Bluetooth 4.0-enabled toothbrush called a SmartSeries 7000, which retailed for \$220.

Compared to the regular manual toothbrush, this one has a myriad of bells and whistles. It connects to an app on your phone, counts precisely 120 seconds, vibrates or emits a green LED light to signify when to move the toothbrush to a different section of the mouth, softens the motor when it senses that you are putting too much pressure, tracks your brushing history, and even entertains you with news for the 2 minutes you are brushing.

Many would think that spending so much on a glorified toothbrush is ludicrous. While it is true that not everyone has that kind of money to spend, the Bluetooth toothbrush does provide some benefits that cannot be attained with a manual toothbrush or even a regular electric one.



## Accountability

Positive reinforcement as well as persistent notifications to remind you to floss or use mouthwash incentivises you to perform proper oral care every day. In addition, the dental “fun facts” and news articles that appear in the app could keep people occupied for the whole 120 seconds, which is especially useful for those who are easily bored and would not brush the full time otherwise.

## Gentleness

In addition to having soft bristles, the toothbrush automatically emits a red light and softens when it senses that you are brushing too hard. Up to 80% of people brush too hard, causing gum recession, tooth sensitivity, and cavities. Having this feature raises awareness of over brushing and preserves tooth health.

In spite of its price, the Oral-B SmartSeries 7000 does clean teeth more effectively, allowing less complications to arise in the future. Many oral diseases stem from poor oral hygiene, so maintaining good brushing habits in the long-run may be key to preventing these diseases from cropping up in the first place.

Sources: <https://gizmodo.com/i-brushed-my-teeth-with-the-worlds-first-bluetooth-toot-1612484768>  
<https://askthedentist.com/oral-b-review/>

# Baking a Difference

By: Lauren Hotseung

Challah for Hunger is an amazing organization whose goal is to build communities inspired and equipped to take action against hunger. Every week this organization invites everybody in the community to come braid challah bread! This bread is sold and the proceeds go to the Berkeley Food Pantry to help students get resources to fight food insecurity. Our Pre-Dental Society attends this event weekly and braids bread together. It is so much fun to be with each other and get a break from studying to do something that is great for our community. Not only is it fun and for a great cause, but it also serves as manual dexterity practice! We are able to practice working with our hands on bread and try to braid the prettiest bread possible. It is great to find places to put our dexterity to the test because we know that when we get to dental school we will need all of the practice under our belts!

**“Through our work, every one of us will discover our own power to spark positive change and work collectively to solve urgent social challenges.”**



Image courtesy of Lauren Hotseung

Challah Bread is a special bread in Jewish cuisine that typically involves intricate braiding.

# Tooth Decay

By Will Choi



By 2015, tooth decay aka the dental caries was the dominant oral health condition the global citizens developed. Among myriad of bacterial groups that inhabit the dental plaque, only a few know species are suspected for the outbreak of the disease, with bacteria *Streptococcus mutans* being the primary actor. A mineral loss is a natural part of the tooth surface renewal thanks to the acid released by the plaque bacteria. When we consume an excessive amount of fermented food such as dairy products, however, the overall pH stays low and mineral loss accelerates as a result. The low pH provides an ideal condition for *Streptococcus mutans* to remain active even after we swallow our food. *Lactobacillus* accelerates the lesion (the damaged area) progression, and the patient will experience intense pain once the lesion reaches the pulp.

Image courtesy of kissPNG

## Dental Terms Word Search

O	G	N	E	R	U	T	N	E	D	T	E	G	E
R	N	D	E	N	T	I	N	T	S	T	I	I	A
T	I	S	E	A	L	A	N	T	N	S	M	N	M
E	N	A	B	S	C	E	S	S	N	T	P	G	A
E	A	H	L	E	D	C	G	N	V	S	L	I	L
C	L	N	C	A	R	E	E	I	E	C	A	V	G
A	P	R	T	A	A	W	O	M	N	A	N	I	A
R	T	L	S	A	U	N	C	N	E	L	T	T	M
I	O	N	L	T	G	B	C	G	E	I	C	I	C
E	O	W	S	R	H	U	L	T	R	N	A	S	T
S	R	O	I	L	T	I	U	I	I	G	L	I	A
B	E	R	R	L	U	S	S	L	T	T	E	U	S
N	A	C	N	S	O	I	A	N	R	A	A	N	I
R	A	T	A	N	M	C	L	E	N	A	M	E	L

OCCLUSAL  
 ABSCESS  
 CROWN  
 AMALGAM  
 SEALANT  
 GINGIVITIS  
 DENTIN  
 IMPLANT  
 ROOT PLANING  
 VENEER  
 CARIES  
 SCALING  
 MOUTHGUARD  
 DENTURE  
 ENAMEL

Answer key on page 11.

# DEOP



By Lauren Hotseung

As a Pre-Dental Student at Berkeley, there are plenty of opportunities to give back to the community! One of our most favorite ways is through DEOP, Dental Education Outreach Program. Through this program, we visit elementary schools as well as retirement homes to help educate our community about the importance of dental care. In the retirement homes, we also help them understand insurance and dental health care and answer questions surrounding that topic. On Friday November 30th, 5 other pre-dental students and I went to a pre-school in the area to present! It was so much fun to interact with little kids and help them understand why ice cream is not the best snack and why we need to brush our teeth often. We start the presentation by showing them what our dinner plates should look like and why we should be eating each food group. After that, we do a skit to show them how eating too many sweets can be harmful to our mouths and brushing can help our health! We finish by singing a song with them and we send them off with toothbrushes and toothpaste. Our hope in all of this is that they are exposed to the information early and can avoid oral health issues in the future. I am so thankful for this amazing program that allows pre-dental students to bond and younger children to learn.

“The disintegration in the oral diseases can be prevented by making an early identification, investigation and providing the desired treatment which is possible by introducing dental outreach programs. The community-based dental outreach programs play a very crucial role in declining discovery-delivery disconnect by introducing awareness.” -Journal of International Oral Health

# What is Noma?

By Will Choi

The condition often recalled as “the face of poverty,” Noma remains as one of the most severe diseases most prevalent in parts of sub-Saharan Africa even today; the disease dates back to more than 1000 years, and Hippocrates and Aristotle account of the illness. It starts as a sore in the gums, yet when untreated it quickly develops into a deadly, deteriorating ulcer that affects and permanently damages the facial skin and bones. Unfortunately, young children between the age of 2 and 6 with malnutrition, dehydration, and lack of adequate hygiene are the most common victims of the plague. As fatal as the conditions can be, world health organization recognizes Noma itself is not all contagious. The good news is, early detection and appropriate treatment can completely halt Noma progression. Fluoride toothpaste application can significantly reduce the risks of entering fatal stages (the last three IRREVERSIBLE ones, or gangrenous, scarring, and sequelae stages that result in death and disability in 90% of cases) combined with antibiotic therapy and drinking safe water.

## Dental Terms Word Search

O	G	N	E	R	U	T	N	E	D	T	E	G	E
R	N	D	E	N	T	I	N	T	S	T	I	I	A
T	I	S	E	A	L	A	N	T	N	S	M	N	M
E	N	A	B	S	C	E	S	S	N	T	P	G	A
E	A	H	L	E	D	C	G	N	V	S	L	I	L
C	L	N	C	A	R	E	E	I	E	C	A	V	G
A	P	R	T	A	A	W	O	M	N	A	N	I	A
R	T	L	S	A	U	N	C	N	E	L	T	T	M
I	O	N	L	T	G	B	C	G	E	I	C	I	C
E	O	W	S	R	H	U	L	T	R	N	A	S	T
S	R	O	I	L	T	I	U	I	I	G	L	I	A
B	E	R	R	L	U	S	S	L	T	T	E	U	S
N	A	C	N	S	O	I	A	N	R	A	A	N	I
R	A	T	A	N	M	C	L	E	N	A	M	E	L

- OCCLUSAL
- ABSCCESS
- CROWN
- AMALGAM
- SEALANT
- GINGIVITIS
- DENTIN
- IMPLANT
- ROOT PLANING
- VENEER
- CARIES
- SCALING
- MOUTHGUARD
- DENTURE
- ENAMEL

Special Thanks to the Publicity Committee:  
Annie Lee, Eve Zhong, and Will Choi



NOVEMBER 3- Cal Pre-dental Society members give back to the community at The Berkeley Project, a semesterly large-scale community service event organized by the Berkeley Project student organization.

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