

TRODENT



OSTROW VISIONARIES

HOW OUR RESEARCH TEAM
IS BRINGING TOMORROW'S
DENTISTRY INTO FOCUS PG 13-18

SECRET LIVES: BALDWIN MARCHACK DDS '71 PG 6
JOURNEY TO THE END OF THE WORLD PGS 9-11

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ROOMS WITH A VIEW

The Ostrow School of Dentistry Faculty Practice—formerly the Oral Health Center—recently moved to the fourth floor of the state-of-the-art Engemann Student Health Center. Now serving USC students plus faculty, staff, alumni, and friends, the clinic is outfitted with 16 dental chairs, complimentary parking, and giant windows overlooking the northwest corner of campus.

PHOTO BY JOHN SKALICKY

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Earlier this year, Ostrow alumni and friends enjoyed a once-in-a-lifetime cruise to South America and Antarctica. Take a little trip with them—sans passport and long customs line—in this cruise recap.

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Ostrow's student group, the Dental Humanitarian Outreach Program, pulled off the biggest dental outreach effort in Kenyan history. Read about their inspiring trip to the slums of Nairobi.

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Long before Jonathan Price PROS '82 was running in elite New York City art circles and exhibiting his stone and steel sculptures across the country, he was at Ostrow, pursuing a specialty certificate. His story proves dentistry is equal parts science and art.



PHOTO PROVIDED BY WYATT DANNELS

THE FIGHTER 8

Not one to give up, Wyatt Dannels DDS '13 hasn't let cancer—or a below-the-knee amputation—keep him from walking across McAlister Field to get his DDS degree. Find out what kept him going.

ostrow.usc.edu

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Dear Trojan Dental Family,

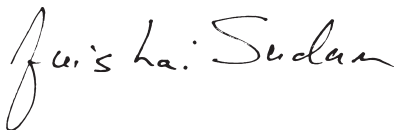
It is a privilege to bring you another issue of the *TroDent*. In this issue, we share with you the research being conducted at the Ostrow School of Dentistry of USC and the talented individuals who make it possible.

As one of the few dental schools housed within an elite research university, we are committed to being of value to the university by contributing to new discoveries in both basic and applied knowledge. The Ostrow School of Dentistry has a rich history of scientific excellence and innovation both in the laboratory and in the clinic. Ostrow research is the foundation of many techniques and technologies that are now standards of dental practice, and our work continues to shape the future of dentistry.

The scientific minds at the Ostrow School of Dentistry are tackling a wide spectrum of important challenges: dental and craniofacial development, mineralized tissues, new dental materials, stem cell regeneration, the use of saliva as a diagnostic tool, infectious diseases, dental public health, and much more. Our researchers include not only our faculty members who continue to publish impactful work and succeed in an extremely competitive funding environment, but also the students, residents, graduate students, and postdoctoral fellows who work alongside them.

Participating in research is an immensely powerful tool for learning, and a strong research environment makes for stronger graduates, whether their professional goals lead them to clinical practice, academia, industry, or elsewhere. At the Ostrow School of Dentistry, our scientific activities and opportunities for students not only enable us to propel the dental profession forward but also enrich the education of dentistry's future leaders.

Fight On!



Avishai Sadan, D.M.D.
Dean
G. Donald and Marian James Montgomery
Professor of Dentistry
Ostrow School of Dentistry of USC



PHOTO BY JOHN SKALICKY

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THE VISIONARIES 13

These five Ostrow researchers—each of whom got their own cover—are helping to set the pace for the future of dentistry. Find out what they're studying and why it just might change the way dentistry's practiced in our cover story dedicated to Ostrow research.

CONTRIBUTORS



TAI HA

Tai Ha DDS '15 is 28 years old and hails from Atlantic City, New Jersey. Born to Vietnamese refugees, Tai is the first American-born citizen of his family. He's also the first to graduate college and will be the first doctor in his family. Son to a jeweler and a nail technician, he's grown up around work requiring dexterity, which is why he chose dentistry. When he's not photographing his travels to Kenya, Tai likes to dance, play poker, and snowboard.



GARY HARMATZ

Gary Harmatz DDS '69 is an active member of the Ostrow alumni community, serving on the Friends of Dentistry and the Board of Councilors. In his spare time, the retired dentist is a wildlife, nature, travel, and underwater photographer. Gary's photographs of the vast expanse of Antarctica are featured in "The Journey to the End of the World" on page 9.



KENI NOONER

Keni Nooner BA '15 is a sophomore, majoring in communication. The Dallas-native came to USC to pursue her dreams in the fields of media, public service, and communication. Currently, she is an intern in communications at the Ostrow School and is also an active member of Alpha Phi Omega, a co-ed service fraternity. She profiled Jonathan Prince PROS '82 who's made a name for himself in the world of sculpture.



LINDA TARRSON

After Bud Tarrson's passing in 1999, Linda Tarrson has continued her late husband's legacy of supporting dental causes. She's remained a steadfast friend of the Ostrow School, generously giving scholarship funds and serving as a member of the Board of Councilors. For this issue, she chronicled the South American and Antarctic Cruise that Ostrow alumni and friends took earlier this year.

BY THE NUMBERS

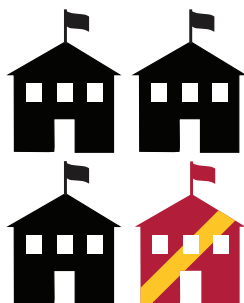


92 Articles published by Ostrow researchers in 2012

\$1.33 Amount spent per American on dental research each year—
That is to say we spend twice as much on one toothbrush than on the scientific discovery and technological innovation to improve U.S. oral health care.

Source: American Association for Dental Research / International Association for Dental Research

Of all the private doctoral dental schools in America, the Ostrow School of Dentistry is **RANKED FOURTH** on the amount of funds awarded by the National Institute of Dental and Craniofacial Research.



Number of Research Posters Presented this Year

129

On Feb. 20, the Ostrow School of Dentistry took over the Galen Center for its annual Research Day, one of the University's biggest events dedicated to student research, presenting more research posters than any year before.



\$9.3M
Total research grants awarded to the Ostrow School of Dentistry in 2012

CALENDAR

17 MAY

2013 COMMENCEMENT » Help welcome the Class of 2013 to the Trojan dental alumni family. | University Park Campus-McAlister Field » 11 a.m.-2 p.m.

19 MAY

BASEBALL » USC vs. UCLA » Friends of Dentistry Family Day » Join the Friends of Dentistry for a pre-game barbecue before watching the Trojans send the defeated Bruins back to Westwood. » Dedeaux Field » 12 p.m. » RSVP: ostrow.friends@usc.edu or (213) 740-0428

28 AUG

FOOTBALL » USC vs. Hawaii » The Friends of Dentistry host a cocktail reception the night before the Trojans kick off at Aloha Stadium on Aug. 29. » Check dentistry.usc.edu/alumni for more information.

21 SEP

FOOTBALL » USC vs. Utah State » Tailgate with the Century Club before USC takes on the Utah State Aggies. » Check dentistry.usc.edu/alumni for more information.

19 OCT

FOOTBALL » USC vs. Notre Dame » Don't miss the train tailgater from Chicago to South Bend for the USC-Notre Dame face-off. » Check dentistry.usc.edu/alumni for more information.

2 NOV

USC RECEPTION » If you're headed to the American Dental Association Annual Session in New Orleans, drop by the Century Club-hosted cocktail reception at the Renaissance New Orleans Arts Hotel. » Check dentistry.usc.edu/alumni for more information.

15 NOV

CASINO NIGHT AND REUNION RECEPTION » Catch up with old friends and make new ones over cocktails and cards. » The Millenium Biltmore Hotel, 506 S. Grand Ave., Los Angeles, Calif. Go to dentistry.usc.edu/alumni for more information.

16 NOV

FOOTBALL » USC vs. Stanford » Homecoming Picnic » Throw back some pre-game food and beer with Team Ostrow before heading off to the Coliseum to root for our boys in cardinal and gold. » Lawn in front of the Hancock Building » Check dentistry.usc.edu/alumni for more information.



Foodie Baldwin Marchack DDS '71 serves a dinner party of 12, with the late great chef Julia Child seated beside him.



BALDWIN MARCHACK DDS '71

BY YASMINE PEZESHKPOUR

There's no doubt Baldwin Marchack keeps busy. From running a private practice in Pasadena, Calif., to being involved in more than five dental societies, his schedule is packed.

Even with all the time he devotes to his career and the study of dentistry, Marchack leaves plenty of time to "dish" out other passions in his life.

Known as a seasoned foodie and gifted chef, Marchack has served dishes to three of Ostrow's deans—including Dean Sadan—and notable foodies, including California winemaker Robert Mondavi and the late cooking legend Julia Child.

He says his passion for food began during his childhood.

Born and raised in Trinidad, Marchack grew up with homemade meals prepared by his mother.

"My mom was a great cook," Marchack says. "The big meal of the week was Sunday lunch when you stuffed yourself as much as you wanted and took an afternoon nap to follow, of course."

Marchack admits he wasn't into cooking when he got married. "My wife Doreen was—and still is—a great cook, coming from a restaurant background, so there was no need for me to learn."

Actually, he didn't start cooking until after he graduated from dental school and traveled the world tasting fine cuisine.

Marchack was inspired to cook when he and Doreen visited their son, Christopher Marchack PROS '92, in college in San Francisco.

Christopher, who had been missing Doreen's home cooking, compiled some of his favorite Caribbean recipes she prepared for him growing up. Upon his parents' arrival, Christopher had made them a meal in his dorm room kitchen. With little expectation, Dr. Marchack took one bite and quickly learned why his son had been known by his friends and roommates for his culinary skills.

The meal was delicious!

"By that time, I was a seasoned foodie, had traveled all over France and Switzerland, and had eaten at all the famous three-star Michelin restaurants," Marchack says.

"But I never thought about cooking until I saw how Chris impressed his roommates. That's when I decided if he can cook here with such little time and space, so can I," he adds.

In 1987, he attended the Cordon Bleu School of Culinary Arts in London where he completed a program on the art of French cuisine.

Less than a year later, he was appointed president of the Los Angeles chapter of the American Institute of Wine and Food, an organization started by Child and Mondavi to help people interested in pursuing a career in the culinary arts.

From 1988 to 1992, as president of the Los Angeles chapter, Marchack organized many activities to fund scholarships for students who wanted to attend culinary programs.

In preparation for one of those events, Child stayed at his home for a few nights. During her stay, the Marchacks held a fundraising dinner for 12 people with Child as the guest of honor.

"The first 11 people we called jumped at the chance to dine with Julia and were willing to pay

the price. It was a fantastic evening, and all of the money funded a scholarship. Besides that, we had the chance to have breakfast together and cooked dinner for her as well. Julia was a lovely house guest," Marchack says.

These days, Marchack's skill reflects the cuisine of the renowned restaurants in which he's dined. He emphasizes taste and presentation with dishes like eggs caviar: soft and runny truffled scrambled eggs stuffed back into the egg shell that has been neatly cut open topped with crème fraîche and Beluga caviar and his unique presentation of uni: Japanese sea urchin, prepared with a savory sorbet of fish stock, yuzu lemon juice, and soy sauce served with grated green apples and chopped shiso leaves.

"The combination of the textures and the flavors explode in your mouth and really deliver the wow factor," he says.

Marchack holds many hobbies and passions in his life and considers his work in dentistry to be one of them.

"Confucius said 'Choose a job you love, and you will never have to work a day in your life.' I love cooking. I love dentistry. I love teaching. So I never work!"



1



2

GIVE KIDS A SMILE DAY Nearly 300 Weemes Elementary students were all smiles after the Neighborhood Mobile Clinic provided them with dental screenings, goodie bags, and a rare visit from the typically nocturnal tooth fairy.

PHOTOS BY KENI NOONER

1) Assistant Professor of Clinical Dentistry Julie Jenks & elementary students treasuring their books donated by the Ella Fitzgerald Foundation 2) The tooth fairy (aka Madeline Schenasi DH '13) & friend 3) Robert Stanislawski PEDO '14 performs a dental screening. 4) Third-grade girls shyly posing for the camera after their dental check-up 5) It wasn't just the li'l ones smiling at Give Kids A Smile Day. Our faculty & students were happy after a gratifying day of giving back.



3



4



5

For more Give Kids A Smile Day pics, go to tinyurl.com/GKAS13

The Fighter

Wyatt Dannels DDS '13 won't let cancer—or a below-the-knee amputation—keep him from walking across McAlister Field this May to receive his dental degree.

BY JOHN HOBBS MA '13

It all started in late 2011 when Wyatt Dannels DDS '13 noticed a bump on his left ankle.

The blonde-haired, blue-eyed dental student with a wife, Jenny, and three kids—two boys, Crew, 6 and Hudson, 4; and a little girl, 15-month-old Navy—didn't think too much of it at first.

A few months later, he had it checked out—and was given a clean bill of health. The doctors told him it was just a lipoma, a benign, fatty tumor, and that he was going to be just fine.

But the continually growing bump still bothered Dannels, who describes himself as an athletic guy who always ate healthfully, went to the gym regularly, and didn't drink or smoke.

It was when he played basketball that he noticed it the most. "Every time I would jump, it would pinch the nerve in my foot, and it just bugged me," he says.

In mid-2012, Dannels had an MRI taken and was given news that would cause the blood to run ice-cold in anyone, especially a young father who had his whole life ahead of him. He was diagnosed with cancer.

Looking at the MRI, doctors told Dannels the lump was likely a synovial sarcoma, a rare cancer that occurs near the joints of the arms, neck, and legs. Its prognosis was bleak.

"I was just in shock, thinking 'Man, I'm probably going to die soon.' It's probably everywhere in my body, and I don't even know it," says Dannels. "All I thought about was my children. Am I going to start making videos for them? 'Hey, Happy 14th Birthday!' or something like that."

Luckily, the biopsy returned slightly different results. Dannels had chondrosarcoma, a less fatal cancer that affects cartilage.

He underwent chemotherapy and radiation therapy, but the bump didn't respond, which left only one option. He'd have to have his lower leg amputated.

It's not news anyone would want to receive,



PHOTO PROVIDED BY WYATT DANNELS

but Dannels says he was actually "estatic," given the treatment meant he wasn't facing an early grave.

He knew he'd have to miss school and found out from faculty that taking a few months off to recuperate would unfortunately mean having to sit out an entire academic year. "I said, 'That's not going to happen.' My goal was to finish and get it done." So Dannels vowed to miss just two weeks of school so he could graduate on time.

On Sept. 25, 2012, Dannels went in for the amputation. He woke up at 5 a.m., and headed to the hospital with a support system in tow: his wife, his parents, and his in-laws.

Before the surgery, Dannels and Jenny prayed and talked about how things would change after the surgery—she'd now have to take care of the couple's three children—and then Dannels, for the last time in his life, walked on two legs into the operating room.

"I remember thinking, 'This thing is so small. It's ridiculous that I'm losing my whole foot. How is this happening?'" says Dannels who explains that most days it still feels surreal. "Some days, I wake up thinking, 'Oh, it was just a dream,' and then I try to get out of bed, and thinking 'Nevermind, it's not a dream.'"

Life, post-amputation, has taken some getting used to. Dannels says it now takes him much longer to get ready in the morning, that he has to sit while showering, and that he misses playing foot-

ball, running, and swimming.

But what bothers him most is when his daughter needs him in the middle of the night, he says. He can't just get out of bed anymore to get her.

After surgery, Dannels returned to the Ostrow School of Dentistry on crutches, relying on help from those around him, at least initially, to keep up with the demanding life of a dental student.

"The faculty has been phenomenal," he says. "It's kinda weird going from being just a student who nobody really knows to every time I walk in a room, everyone says, 'Hi,' and talks to me."

Despite another medical setback—shortly after the first surgery, Dannels developed a staph infection and had to have an additional inch of his leg removed—he's managed to continue his life just as he had before the amputation, thanks to a fighting spirit.

"I'm the guy who always says 'Fight On!' to everything," he says. "If I had been like, 'Yeah I should take the whole year off,' all it would do is set me back more and put me further back in life."

This year, Dannels—who was recently fitted with a brand new lightweight prosthetic leg—will make his way across McAlister Field to receive his DDS degree. Afterwards, he plans to return to Arizona to practice dentistry.

His advice to others who face obstacles in their studies? "It's going to work out," he says. "You just put your head down, put your shoulder to the wheel, and work hard."

JOURNEY TO THE END OF THE WORLD

Ostrow supporter Linda Tarrson chronicles her once-in-a-lifetime trip to Antarctica aboard the L'Austral yacht with more than 40 other USC dental alumni, friends, and family.

BY LINDA TARRSON

PHOTOS BY GARY HARMATZ DDS '69

How do you turn a wonderful trip into an epic adventure? You take a group of Ostrow alumni and friends and send them to the end of the world. And that's just what we did from Jan. 29 to Feb. 9.

Our first stop was Buenos Aires, Argentina. The city is known as the "Paris of South America," and we set it on fire! We stayed at the beautiful Alvear Palace Hotel and enjoyed Argentine steaks and wine, the best empanadas ever made, and shopping and sightseeing.

Each morning started with breakfast at the exquisite buffet followed by sightseeing. We visited the colorful town of Boca Raton with locals dancing the tango at delightful street cafés. We were fascinated by the city tour, which included stops at the government building where, in the 1970s, mothers walked to protest the kidnappings of their children. We also visited the incredibly beautiful, world-famous La Recoleta Cemetery—the final resting place of Eva Perón and one of Napoleon's granddaughters.

On the third day, we boarded a plane headed to the "end of the world," where the big adventure started. Our flight from Buenos Aires took us to Ushuaia, the Earth's southernmost city. Once we were there, we boarded a bus that took us sightseeing through Tierra del Fuego, which is separated from mainland Argentina by the Strait of Magellan. It is the only Argentine province without land on the South American continent.

As we rode through the countryside, we were treated to the natural beauty of the area and stopped for lunch at a local rustic restaurant where we ate the house specialty of roasted lamb. We also saw the location where sled dogs are trained and the world's southernmost golf course.

After our day of touring the end of the world, we were ceremoniously dropped off at the local port where we first saw our ship—the sleek L'Austral—that would take us to Antarctica. Once onboard, the

captain, crew, and naturalists who went to ensure our safe journey greeted us to begin our journeys through the Drake Passage.

After settling into our cabins, we met with our fellow travelers in the auditorium where we were prepared for our adventure. We learned each time we left the ship to board the Zodiacs—or inflatable rafts—for our daily expeditions, we would have to be decontaminated. It is very important that we not leave behind germs or DNA in this fragile ecology, so we had to vacuum our clothing to remove any possible trace of seeds or soil. During the boarding process, we were required to walk through a solution that decontaminated our boots.

>>





Disembarking from Ushuaia, the world's southernmost city, the sleek L'Austral yacht cut through the dark blue polar waters on its way to Antarctica.

After our expeditions, we walked through brushes and solutions to ensure we did not bring contaminants back onboard.

It is difficult to describe the immense and overwhelming beauty of Antarctica. Everything you have ever heard is true. It is pristine. The snow is the whitest. The skies are the bluest. The water is the coldest. The air is the freshest. It is so quiet, so magnificent.

My favorite spot was the iceberg graveyard in Paradise Bay. It is an eerie experience to float quietly among these incredible edifices. Their breathtaking shapes soar above you as their cold turquoise beauty sinks beneath. It is otherworldly to hear only the hushed voices of your fellow travelers and the clicking of their cameras.

On our travels, we came upon all manner of animals—leopard, fur, and Weddell seals; orca and minke whales; albatross, snow petrel, and Wilson's Storm petrels; and chinstrap, gentoo, and Adélie penguins.

For all the pristine beauty of Antarctica, it is amazing to

experience the sights and smells of penguins in their natural habitat. They are loud, smelly, and hilarious. They are the most amazing little creatures. Because they are not harmed, they are not afraid, and it was fabulous to mingle with them as they went about their business. It was sheer joy to watch them as they swam in the sea, climbed on the icebergs, and ran along the waterfront. What a gift to be able to share their world!

We had a wonderful captain who would greet us as “dear passengers” and gave us “special treats.” One such treat was having the ship give a “French kiss”—the ship was a French cruiseliner—to the continent, which meant touching land with the bow of the boat.

Several of our more adventurous shipmates went hiking along the ridge of Deception Island to Neptune's Window. Deception Island is one of only three calderon volcanoes on Earth, and the old whaling village is a ghost town of buildings and whale bones that were preserved following a devastating eruption.

We also went to the South Shetland Islands, Port Lockroy, through the Lemaire Channel, the Gerlache Strait, Wilhelmina Bay, and the Weddell Sea Brown Bluff. We climbed onto ice sheets, climbed across snow fields, and stood on the continent of Antarctica twice.

Traveling to Antarctica was an experience of a lifetime. What made it truly special, though, were the incredible people who did it together. In the Ostrow alumni community, there is always someone who will have a similar interest—whether it be sightseeing or relaxing, dining or shopping. It is a very inclusive group that has great conversations and camaraderie with friends old and new.

I simply cannot wait for our next adventure together.



The leopard seal might seem cuddly, but it's actually one of Antarctica's top predators.



Antarctica in Pictures

See more of Dr. Harmatz's Antarctica images here: tinyurl.com/antarcticacruise



CELEBRATING RICHARD KAHN DDS '64 surrounded by more than 200 long-time friends, family, and former students, Dr. Richard Kahn made his retirement official on April 20 at the Four Seasons in Beverly Hills after a half-century at the Ostrow School of Dentistry.

PHOTOS BY GLENN MARZANO

1) "Long live the dinosaur!" Richard Kahn was teasingly referred to as a prehistoric creature by Dean Sadan **2)** The Kahn clan **3)** Kahn & his longtime assistant Cindy Mitchell **4)** Kahn's granddaughters Danielle, Madison, & Jessica **5)** Kahn & wife Judy share a laugh. **6)** Fay Chan-Cho DDS '90, George Cho DDS '87, PROS '90, & Kahn **7)** Peter Wu DDS '86, Beth Wu, Kahn, & Vivian Chui DDS '86, ORTHO '93 **8)** Alexandre Aalam PERIO '93, Alina Krivitsky DH '00, DDS '05, PERIO '08, Wendy Craggs, & Abdi Sameni DDS '91



THE VISIONARIES



Yang Chai
Ph.D. '91, DDS '96

Anyone involved with dentistry today knows that the profession and the science behind it are advancing more rapidly than ever before. The Ostrow School of Dentistry of USC, part of one of the nation's top research universities, is set apart from other dental institutions in how we are committed not only to excellence in dental education but also to remaining at the forefront of scientific investigation.

From developing new dental techniques and materials to understanding the intricacies of oral, facial, and cranial development, everything our researchers do is intimately connected to clinical practice and improving patients' lives. This is a natural product of having many faculty members who are trained in both clinical practice and conducting research. Successfully translating our research into clinical applications is also facilitated by frequent and productive multidisciplinary collaborations with USC peers and outside colleagues in medicine, engineering, and more from around the nation and the world.

Many of our faculty members are world-renowned for their groundbreaking research, high-impact publications, funding success, awards, and leadership positions at national and international levels. But the Ostrow research community has also made a name for itself for the unique training opportunities it offers to students and young researchers starting their scientific careers. Alumni of our graduate programs and postdoctoral fellowships have gone on to become influential, award-winning scientists and leaders of elite academic and research organizations.

The Ostrow research environment also has an important effect on students working toward a career in clinical practice. Students participating in research get a firsthand look at upcoming developments in the profession, one-on-one interaction and mentorship from faculty members, and develop a love for learning and critical thinking that will stay with them for life.

Read on to learn more about five of the many Ostrow investigators, their work, and what participating in research means to them.

RONALD CHUNG

BY BETH NEWCOMB MPH '13

Dentistry is a family tradition for Ronald Chung, a third-year DDS student who grew up visiting his parents' dental practice and talking about the profession over dinner. Since he learned about Ostrow first-hand from his Trojan dentist family members, he knew he'd have many opportunities to maximize his own education.

"When I came to dental school, I thought I would really take ownership of my education and not only get a good clinical education but also reach out and do other things," Chung says.

Under the mentorship of Professor Yang Chai Ph.D. '91, DDS '96, Chung began investigating transforming growth factor beta (TGF- β), a protein with many important functions in embryonic development, and its role in lower-jaw growth. When one of the major cell signaling pathways of TGF- β was disrupted by a mutation, specific parts of the mandibles of affected mice failed to form properly, Chung says.

However, when an alternative pathway for TGF- β was activated in another group of mice with the same mutation, the jawbone's formation was partially restored.

"[The mandible] doesn't grow exactly the same way to the same size, but it shows similar features and grows back almost 90 percent," Chung says. The long-term hope is that finding similarly redundant cell signaling pathways for TGF- β in humans will provide non-surgical, pre-natal treatment options for mouth and face deformities, he adds.

In addition to his work with TGF- β , Chung and fellow student Peter Lee DDS '13 worked with Assistant Professor Parish Sedghizadeh to study bisphosphonate-related osteonecrosis of the jaw, or BRONJ. The disease is characterized by the unexplained death of jawbone tissue in patients who have taken bisphosphonates, drugs used frequently for osteoporosis.

Using data from BRONJ patients, Chung and Lee built a model that connected the length of bisphosphonate treatment, patient body mass, and amount of bisphosphonate present in patients' plasma and bone to determine the toxic threshold, at which point the level of bisphosphonate present becomes likely to cause BRONJ.

"Our conclusion is BRONJ has everything to do with the duration of bisphosphonate therapy," he says. "People are accumulating this in their bodies."

The project was lauded as the best clinical science project conducted by DDS students at Ostrow's 2013 Research Day.

Chung not only presented both projects at Research Day but also helped plan the event as president of Ostrow's Student Research Group. He also was editor-in-chief of the *Explorer*, an award-winning annual research magazine created entirely by students.

Chung's dream is to become an orthodontist and go into private practice, but he emphasizes how conducting research has enriched his education and perspective.

"With research I feel like I'm getting a very holistic education," he says.



Check out highlights from this year's Research Day in the award-winning *Explorer*:
tinyurl.com/explorer2013



CHLOE COHEN

BY BETH NEWCOMB MPH '13

Chloe Cohen, a third-year periodontology resident and craniofacial biology master's student, knew from an early age she wanted to pursue dentistry, but she didn't know it would lead her to experience dental research as well.

Cohen became interested in dentistry when she received orthodontics as a child, and she worked for her orthodontist in high school to learn more. Keeping the Ostrow School of Dentistry's reputation for high clinical standards in mind, she completed her undergraduate degree at USC before being accepted into the school's DDS program.

"USC had an amazing reputation for their dental school, and I wanted to be the best," she says.

During dental school, her experiences shadowing a periodontist led her to fall in love with surgery and periodontology, and she began her advanced periodontology residency at USC following graduation. She simultaneously began work on a master's in craniofacial biology, which launched her interest in research. Now, Cohen has worked on two projects that have given her valuable experience in both laboratory and clinical research.

Under the guidance of Professor Jorgen Slots, Cohen began investigating the bacteria in dental plaque of otherwise healthy adults with untreated periodontal disease, comparing the types of bacteria found beneath and above the gum tissue.

As predicted, the bacteria populations above and below the gumline were different. "We're also finding interesting things like a new aerobic bacteria that is subgingival, which is really unusual," she says, adding that the project's next step is to repeat the analysis with samples from patients after treatment.

Cohen's other project, conducted with Associate Professor and Advanced Periodontology Residency Program Director Homa Zadeh DDS '87, examines the efficacy of a new, simpler technique for connective tissue grafting developed by Zadeh.

The technique, Vestibular Incision Subperiosteal Tunnel Access (VISTA), is a less invasive alternative to traditional surgical treatment for receding gums that uses a single incision above the gumline and an innovative suturing technique to secure the gum tissue properly over the root.

The root coverage results are similar, and in some cases better, than the traditional method, Cohen says. Her project regarding VISTA's effectiveness was named Most Innovative by the USC Stevens Center for Innovation during Ostrow's 2013 Research Day.

"I get to see the results firsthand with my patients," she says. "[The intrasulcular method] is very difficult, and a lot of things can go wrong. VISTA is straightforward, simple to do, and reduces chair time."

While Cohen is still aiming for the clinic after graduation, she's also thinking about staying involved with research and education, perhaps as a part-time faculty member.

"I want to work in private practice, but I also want to stay close to academics because you can never learn enough," Cohen says. "I still have questions. If you don't have questions, that's when you should be worried!"

SILLAS DUARTE JR.

BY BETH NEWCOMB MPH '13

Associate Professor Sillas Duarte Jr. is busy at Ostrow, balancing his roles as chair of the Division of Restorative Sciences and director of the Advanced Operative Dentistry Program with his research. He's happy to use his clinical and teaching skills with his research expertise in his work at USC, since he says the combination has helped him "discover new ways of seeing things" throughout his career.

Originally from Brazil, Duarte received his DDS from São Paulo State University at Araraquara. During his sophomore year in dental school, he got involved with research for the first time, and he was inspired to combine his clinical knowledge and skills with a strong scientific background as he began his dental career. As he treated patients in private practice, he completed a fellowship and certificate in operative dentistry as well as a Ph.D. in biomaterials. He continued to research dental materials and restorative techniques upon relocating to the United States, and he arrived at USC in 2011.

Duarte's current research is directed at determining which methods improve the retention and longevity of dental restorations. "Any material we use to restore your tooth is highly affected by moisture, fluids, and water," he says. "My focus is how we can improve bonding and delay the degradation of the bonded interface."

He says the three main aims of his work are increasing a dental restoration's longevity, understanding the behavior and aesthetics of the biomaterials used in restorations, and improving the interactions between restorative materials and the natural tooth structure. His latest project compares different materials not only by noting their outward appearance and characteristics but also by analyzing reconstructions of the adhesive interfaces of restored teeth. Detailed three-dimensional images, produced by slicing a tooth into hundreds of nanometer-thin sections and scanning them, reveal precisely where weak spots in the adhesion between the restorative material and natural tooth have begun to form.

Duarte says Ostrow is a great place for his research due to its long legacy of clinical excellence and innovation and the ability to interact with high-end clinicians. He adds the research environment at USC is very forward thinking, which is critical for a profession that is changing faster than ever. "New products and techniques hit the market every six months," he says, emphasizing the great need for evidence dental practitioners can use to make good clinical decisions.

Ostrow's constant presence at the forefront of dental science also makes it a great educational institution, he adds. The Operative Dentistry Program—the only one of its kind on the West Coast—not only offers its residents excellent clinical training complete with the latest information and technology but also the opportunity to conduct research, as each resident also completes an MS in Craniofacial Biology.

"Residents are exposed to a completely different level of understanding of the profession," by participating in research, Duarte says.





AMY MERRILL-BRUGGER

BY BETH NEWCOMB MPH '13

Assistant Professor Amy Merrill-Brugger Ph.D. '05 is trained in both human genetics and developmental biology, and she's using her multifaceted expertise to unlock the mysteries of how genes direct bones to grow during embryonic development.

A science enthusiast since childhood, Merrill-Brugger began conducting research as an undergraduate at UCSB studying molecular, cellular, and developmental biology. She pursued graduate studies, arriving at USC for the first time as a Ph.D. student in biochemistry and molecular biology at the Keck School of Medicine. During that time, she began exploring craniofacial development and birth defects, which has influenced her work ever since.

"Our face is our window to the world, so these birth defects are particularly devastating," she says.

Merrill-Brugger went on to do a postdoctoral fellowship at UCSF, where she studied the timing of bone formation. Many birth defects involve formation of bone that's either too early or too late, she explains.

She also completed postdoctoral training at UCLA and Cedars-Sinai Medical Center, focusing on the discovery of gene mutations responsible for skeletal birth defects. She says the experience was "incredibly rewarding."

"I could see my research was directly impacting the families we were working with," she says. "By identifying the disease genes for disorders without a molecular diagnosis, we immediately give the families an option for prenatal diagnosis."

Merrill-Brugger joined Ostrow's Center for Craniofacial Molecular Biology (CCMB) as a faculty member in 2010, taking her research to the next step of identifying precisely what genes connected to disorders do to regulate the shape and timing of bone growth during embryonic development. She hopes to use the information to devise new strategies for bone regeneration and repair, which has huge clinical implications, she says.

"Five percent of all children are born with craniofacial defects that affect the underlying bone," she says. "Most of us will also face the challenges of poor bone health as we age. We hope the information we glean from skeletal birth defects will also allow us to repair adult bones injured through disease or trauma."

Her dual appointment in Ostrow and Keck was supported by a prestigious P30 grant from the National Institutes of Health designed to support promising new faculty. She says returning to USC as faculty and joining CCMB was like returning home.

"CCMB is a world leader in the field of craniofacial development and regeneration," Merrill-Brugger says. "To be a member in this group of highly successful researchers is an honor."

Her multidisciplinary background and dual faculty appointment give her many great opportunities for networking and collaboration with her USC colleagues.

"It's nice to have this wonderful network of scientists around you," she says. "USC is unique in that the faculty are so tightly knit. There's a wonderful sense of community."

MICHAEL PAINE

BY BETH NEWCOMB MPH '13

Professor Michael Paine PERIO '99 is not only researching how the human body forms tooth enamel, he's also influencing the next generation of craniofacial biology scientists and science-minded clinicians as director of the USC Craniofacial Biology Graduate Program.

A native of Australia, Paine studied biochemistry before attending dental school at the University of Sydney. While he "enjoyed the clinical component of dentistry," he says he was particularly inspired by one of his third-year pathology professors, and after practicing dentistry, he returned to school to obtain a Ph.D. in pathology.

He came to the U.S. for postdoctoral work, and he eventually began working with Professor Malcolm Snead of the Ostrow School of Dentistry Center for Craniofacial Molecular Biology (CCMB). Paine has remained at Ostrow ever since, fulfilling his postdoctoral fellowship, completing a periodontology residency, becoming a tenured faculty member at CCMB, and leading the graduate programs in craniofacial biology.

His research has focused on the delicate processes that surround the creation of tooth enamel—the human body's hardest substance when properly formed.

"The research [Snead] was doing was on enamel formation and biomineralization, particularly how the enamel matrix proteins interact with each other," Paine says. "I worked on a project with him, and now 20 years later I'm still here playing with that same sort of theme."

Tooth enamel forms during development as ameloblast cells and enamel matrix proteins on developing teeth interact, depositing and arranging minerals that make up the finished enamel. After the enamel is formed, the matrix of proteins is removed.

The enamel formation process can go awry, as seen in the disorder amelogenesis imperfecta. Currently, one aspect that Paine and his collaborators are focused on is the role of proper ion transport and pH control within the enamel matrix. Mutations in certain genes for proteins that control pH and ion movement have now been connected to improper enamel formation, he says.

"If you can identify the processes fundamental to tooth formation, then you have many opportunities to find out how these activities can go wrong," he says.

In addition to the discoveries he's made with his research, he's helped many Ostrow students through his leadership of the school's graduate programs.

In 2011, Paine was awarded a prestigious five-year T90 training grant from the National Institutes of Health, which provides funding for tuition, stipends, travel, and more to Ph.D. students and postdoctoral trainees at Ostrow each year. The grant adds to an already attractive research setting for both new and seasoned researchers, he says.

"USC, Ostrow, and CCMB have a thriving, protective research environment with junior and senior investigators working together," Paine says. "We have a great reputation, a strong research profile, and we do particularly well year after year with funding, publications, and research."



Into Africa

It went down as the biggest dental outreach effort in Kenyan history, and 50 Ostrow School students and faculty were behind it.

BY JOHN HOBBS MA '13

They poured in from the Nairobi slums.

By 8 a.m., a line of people had gathered, snaking around the concrete building—children wearing brightly colored American athletic apparel incongruent with the surrounding squalor, elderly people who had endured agonizing dental pain for decades, and all ages and severity of cases in between.

Most of those lined up had never seen a dentist before. They only knew they needed relief from constant pain, with teeth fractured down to the gumline and insidious infections making it hurt to chew.

Inside the building, 45 Ostrow students, five supervising faculty, and one local dentist finished their pre-session meetings and prepared the 18 dental chairs for an incredibly busy day of work, providing oral health care to some of the world's most underserved.

It was the fifth international trip for the Dental Humanitarian Outreach Program, an Ostrow student group aiming to deliver USC-quality dental care across the globe. Since its inception in 2008, the group has traveled to Honduras (twice), Colombia, and Belize.

The group relies on financial support from Crest as well as donations from dentists and supporters to fund these service trips around the world.

This year, Sean Vreeburg DDS '14 and Marco Savittieri DDS '14 were at the helm as co-presidents. Vreeburg joined the group in 2011 and went on its trip to Cartagena, Colombia—arguably one of the best experiences of his life, he says, with a smile.

"To be able to help people who are so underserved on every level is so gratifying," he says. For this trip, which took place Dec. 7-17, Vreeburg wanted to set the bar even higher than last year, getting more students involved and heading to a place even further flung.

He succeeded. This year's dental outreach program goes down in history as Kenya's largest. And though there are no records to confirm it, Vreeburg says officials think it might've been the biggest in African history.

At 8:15 a.m. each day, the patients started filtering in, one at a time. Vreeburg says the Kenyan children—with whom the group took photos and gifted Barbie dolls and racecar toys—were ideal patients. "These kids were statues," he says of their ability to stay still. "And they were fearless. They didn't flinch at anything."

One patient really stood out for Vreeburg. It was an 8-year-old girl who'd come in with her mother who was crying because her daughter had a lesion on her front tooth. "When she smiled, she had this black spot on her tooth," Vreeburg says. "It looked terrible to be honest."

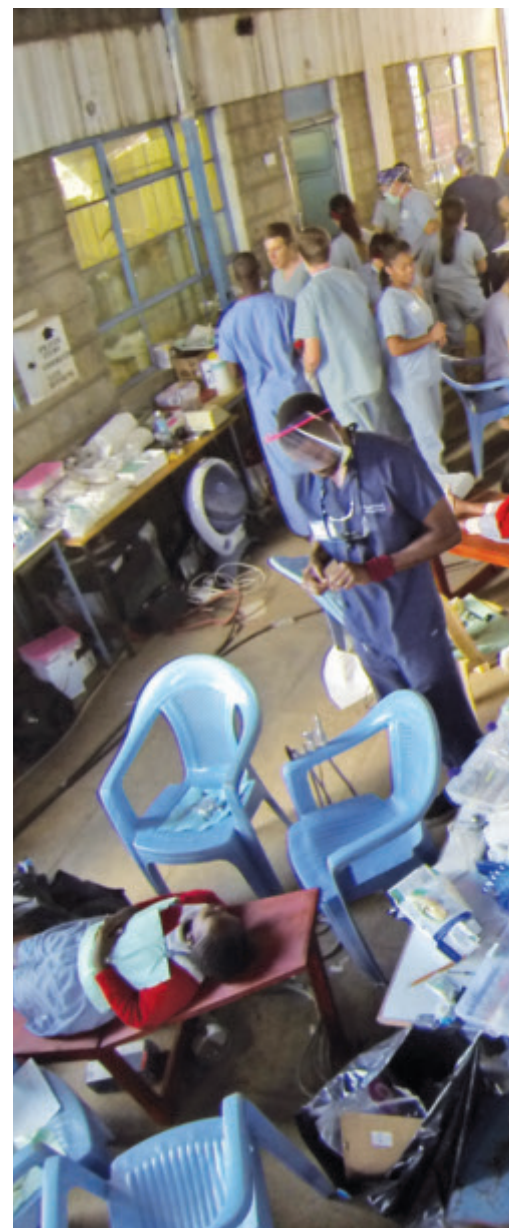
The mother worried her daughter might never be able to find a suitor to get out of the slums. In Kenyan culture, men and women's social roles are limited.

For men, it's manual labor that makes you an asset to society. If a man has a missing limb, he can be cast aside. For women—as much as the American women's liberation movement might wince—it's beauty that makes her an asset. If she's unattractive, she might never get married.

Co-president Savittieri took the girl's case. He first removed the decay, which Vreeburg says left only a nub behind. Next, he contoured a prosthetic tooth for the little girl. Hours later, she left with a perfectly gleaming smile.

"I think she must've cried for 20 or 30 minutes because, in a sense, it completely created a new hope and potentially a new future for her," Vreeburg says. "It hit home and really touched me."

In all, the Dental Humanitarian Outreach Program treated 200 Kenyan patients—a seemingly small number, but the group chose to do full-mouth dentistry rather than emergency-style dentistry where just one quadrant—the unhealthiest—is treated.



They also sought to give these first-time patients the highest caliber of care. "I wanted it to be as if we were on the second floor [of the Norris Dental Science Center]. We had the same sterile instrument protocol, the same start checks, prep checks, and final checks," says Vreeburg.

"I wanted everyone to know they were getting the best care that you can get in the world in a place where there really is no care," he added.

For those they couldn't treat firsthand, they held oral hygiene instruction sessions, showing the Kenyan children how to brush and handing out more than 15,000 toothbrushes.

"When we gave these kids toothbrushes, it was the nicest thing they owned," says Vreeburg who went on a tour of the slums, seeing how families of six or eight would live in a 10-foot by 15-foot shack with mud floors, sheet-metal roofs, and no run-



PHOTO BY TAI HA DDS '15

ning water.

At the end of each treatment day, the exhausted students were bussed back to their hotel for dinner and then went to bed early for the next morning's wake-up call.

But the trip wasn't all work, Vreeburg admits. The group took tours of the Maasai Mara Game Reserve where they were surrounded by wildlife. "The refuge was exactly as you'd imagine. As far as you can see is grass with a few staggered trees and wildlife," he says. "We'd drive up to all the giraffes and zebra. They're all right there." The group saw four of the "big five"—elephants, lions, water buffaloes, rhinos, and leopards.

Though Vreeburg's now the immediate past president of the organization, he says he'd like to continue giving back to the community, both overseas and closer to home.

"I plan on doing this the rest of my life," says Vreeburg.

"Anytime you're working with an underserved community that has no idea about dental care, it's so rewarding to be able to convey to them how important it is and to take people out of pain and

fix any big problems," he says.

The Dental Humanitarian Outreach Program is already planning its next trip, with India, Indonesia, or Thailand as possible destinations.

For more information on the Dental Outreach Humanitarian Project, go to uscdhop.org.



Kenya in Pictures

Check out more of Tai Ha's images from the Kenyan trip here: tinyurl.com/kenyaDHOP



See the video from the Kenyan trip here: tinyurl.com/USCDHOP

RON NGUYEN DDS '10

BY JOHN HOBBS MA '13

Ostrow alumnus Ron Nguyen caught the entrepreneurial bug during dental school when he developed a thin, lightweight loupe that's become a favorite among dental professionals. Working long hours from the living room of his tiny apartment, Nguyen laid the groundwork for what would become UltraLight Optics. His Orange County-based company now has 40 employees, and he's branched out to other dental products as well. We caught up with Nguyen to have him shine a light on how he's enjoying his success.

You managed to start a business while in dental school. How were you able to juggle so much all at once?

Learning to juggle the business and school had a lot of great moments, but it also had a lot of double bookings between business meetings and exams. For three years, I'd wake up at 5 a.m., drive 50 miles to my office, and return at midnight on the days I didn't have school. It was only possible with the flexible support of the USC faculty and staff. They knew the company would be successful before I did.

How has the business fared in the past three years since you graduated?

It has accomplished more than I could ever imagine. UltraLight Optics' Feather Light LED headlight and its other products have helped dentists perform better quality dentistry and be more productive. I am very proud of that. Janet Lent DDS '78 once said to me, "You have done

more for dentistry now than you ever will with your own two hands for the rest of your life." I had no idea how true that would become.

How has what UltraLight Optics become stacked up to what you originally envisioned?

It has by far exceeded every expectation I ever had. I only anticipated making \$7,000 total for a year. Now, the company has afforded me the ability to finally help my friends, family, and even donate back to my alma mater.

Tell me about your dental career. Since graduating, where have you landed as far as practicing dentistry?

in dentistry closer than ever.

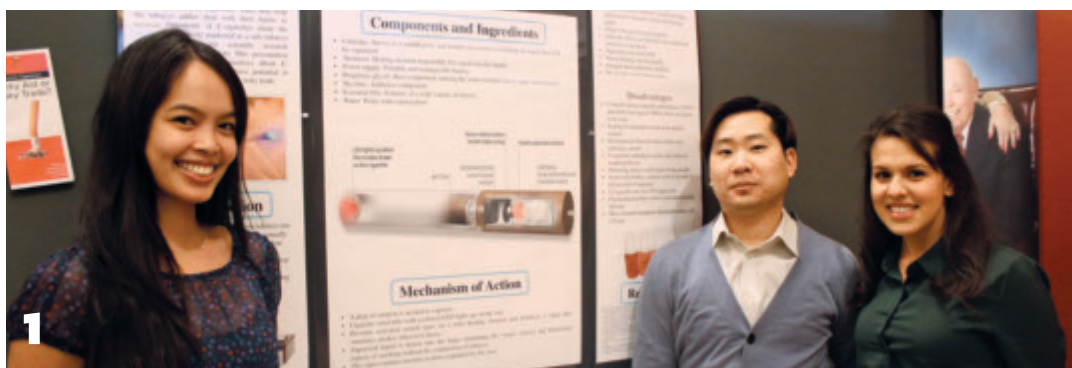
Looking back on school, what would you say was one of the best lessons you learned?

The Trojan family really does exist! It's one of the most valuable assets of USC that allows business to flourish through networking.

What advice would you give to the outgoing Class of 2013?

After spending the past four years learning about the clinical side of dentistry, it's time to start learning about the business side of it. A successful dentist is the one who successfully merges the best of clinical, politics, business, and even sales into their practice.





RESEARCH DAY There were more research posters than pennants at the Galen Center on Feb. 20 when the Ostrow School of Dentistry—along with the Biokinesiology & Physical Therapy and Occupational Science & Occupational Therapy divisions—held one of USC’s biggest days dedicated to scientific discovery.

PHOTOS BY BETH NEWCOMB

1) Kristine Parungao DH '13, William Lee DH '13, & Melissa Olmedo DH '13 2) Kenneth Smith DDS '15 3) Dean Avishai Sadan, Hamid Barkhordar DDS '13, Pooyan Nasibi DDS '13, & Associate Dean of Research Yang Chai Ph.D. '91, DDS '96 4) Sahar Ansari, Ph.D. '14 & Chris Moulding, USC Stevens Institute for Innovation 5) Moulding & Chloe Cohen PERIO/MS '13 6) Research Associate Junichi Iwata 7) Sadan, Peter Lee DDS '13, Ronald Chung DDS '14, & Chai



For more Research Day pics, go to tinyurl.com/researchday13

Heavy Metal Rock Star



Vicom 1 (Blue)

Before Jonathan Prince PROS '82 was a world-renowned steel and stone sculptor, with exhibitions across the country, he studied restorative dentistry at the Ostrow School of Dentistry.

By Keni Nooner BA '15

His sculptures have been exhibited from coast to coast—and many art galleries and fairs in between.

There were the *Southern Remnant* and the *Bore Block* steel sculptures that occupied Christie's Sculpture Garden in New York City in 2012.

Four monumental pieces were on exhibit for nearly a year at the IBM Atrium in New York City.

His *Vestigial Block*—a six-foot cube of weathered and stainless steel—took up permanent residence at the Eli and Edythe Broad Museum of Art in East Lansing, Michigan.

And recently, his work was featured at the Art Miami Fair, adding to a growing list of locations where he's exhibited his stone and steel sculptures, including international cities such as Moscow and London.

But before Jonathan Prince PROS '82 was running in New York City's elite art circles, he was spending hours in the labs of Ostrow School of Dentistry, pursuing a specialty certificate in restorative dentistry.

It's not necessarily a giant leap from the scientific world of dentistry to the aesthetic world of sculpture. It's even possible to see some of the dental influences in Prince's work. For example, his *Vicom 1 (Blue)* (pic-

tured to the left) has many of the crevices and smooth folds as the pits and cusps of a tooth.

"I believe restorative dentistry, perhaps more than any other area of medicine—even plastic surgery—intimately ties art and science together into one discipline," Prince says.

Prince's idea of blending dentistry and artistry together is one that has gained traction industry-wide and at the Ostrow School. Ostrow now offers a Dental Morphology course—taught by aesthetic dentistry expert Pascal Magne—where students draw, sculpt, and then build in what Magne calls a 2-D-3-D-4-D approach.

Prince grew up in New York City, where he was exposed to the world of cultural arts and sciences from a young age. He says his interest in sculpture began at an early age when he had the opportunity to meet famous Cubist artist Jacques Lipchitz who was working on a giant clay sculpture that would eventually become a famous bronze.

Prince began his higher education at the University of Wisconsin in Madison and eventually ended up at Columbia University where he completed his prerequisites for medical school.

By that time, he grew focused on becom-



The Southern Remnant (foreground) and Bore Block (background) were featured in Christie's Sculpture Garden.

ing a dentist and was accepted into Columbia University's College of Dental Medicine. After receiving his DDS degree from Columbia, he knew that studying prosthodontics, the field of specializing in oral rehabilitation and function, was the next route.

For Prince, the central beauty of USC and Los Angeles served as a "sweet spot" attraction for learning about the technicality and art of restorative dentistry, stating "[I felt that] USC had one of the strongest programs in the country when it came to the precision and artistry associated with restorative dentistry."

The memories of all of the hard work and time Prince spent in the Ostrow School never faded. He explained his friendship with professors and peers, saying, "We often joked that each hour we spent with a patient resulted in at least four hours in the lab. As I look back at that time and the shared learning and camaraderie that we as classmates all experienced, it remains as some of my fondest memories."

Although he is no longer a practicing dentist, Prince says he values his experienc-

es in dentistry, as well as stints in filmmaking, computer animation, and optical engineering innovation.

"Creating art for me is about taking my life experiences and interests and finding a representational form to express my thoughts," Prince says. "I believe my diverse career has had a positive impact in my pursuit of art making."

Currently, Prince owns a sculpture studio in Massachusetts where he creates art through techniques such as welding and metal forming, pushing the limits of technical precision.

Utilizing his experience of art in combination with science, he definitely pushes his idea that "perfection is alluring for us all, but there can also be beauty in the breaks!"

Prince truly believes that every experience is worth having and learning from because "life experiences ultimately manifest themselves." Prince leaves this word of advice and challenge for those who want to fulfill their passions: "Be fearless—easier said than done!"



See more of Prince's work at jonathanprince.com



FRIENDS OF DENTISTRY SCHOLARSHIP RECOGNITION DINNER The annual Scholarship Luncheon got an upgrade—and new name—this year, thanks to the Friends of Dentistry, which stepped up to host the event. More than 50 scholarship recipients and their generous benefactors were honored at the event, which took place Feb. 15 at the Jonathan Club in Downtown Los Angeles.

PHOTOS BY GLENN MARZANO

1) John J. Lytle DDS '58, MD '65; Marcia Lytle; Courtney Mason DDS '16; Michelle Lytle; & John L. Lytle '78, DDS '87, OFPOM '90 2) Daniel Burkhead DDS '81, Jennifer Haddad DDS '13, & Carl Rieder DDS '59 3) Mark Tarica '70, DDS '74 & Alison Koop DDS '14 4) Henry Yamada DDS '61, Ph.D. '75; Shoko Sato PERIO '14; Baldwin Marchack DDS '71, Bethany Kum DDS '14, & Christopher Chan DDS '13 5) Scholarship recipients



For more Friends of Dentistry Scholarship Recognition Dinner pics, go to tinyurl.com/scholarshipdinner13

**IN MEMORY OF
DR. RANDALL ACEVEDO**
Dr. Stan Hanes

**IN MEMORY OF
DAVID CANDELARIA**
Dr. Derick Tagawa

**IN MEMORY OF
DR. VAL CLARK**
Dr. John Aschieris

**IN MEMORY OF
DR. FLOYD DEWHIRST**
Dr. and Mrs. William Ozawa

**IN MEMORY OF
DOLORES DIGREGIRIO**
Ms. Patricia M. Okada

**IN MEMORY OF
DR. ALFRED FRIEDMAN**
Dr. and Mrs. Richard Kahn

**IN MEMORY OF
DR. KENNY GAYNES**
Dr. Dean Miller

**IN MEMORY OF
JANET ROSS GIVEN,
DH 1959**
Dental Hygiene Class of 1959

**IN MEMORY OF
BARBARA HALLIGAN**
Ms. Carol N. Bernstein

**IN MEMORY OF
DOREEN HOWES
HAMBLETON**
Mr. and Mrs. Daniel M.
Brigham Jr.

**IN MEMORY OF
MRS. LUCILLE INGRAHAM**
Dr. and Mrs. Ralph and
Sigrid Allman

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DR. KARL KAISER**
Dr. and Mrs. Donald J.
Kornblau

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DR. IRWIN LINDEN**
Dr. and Mrs. Richard Kahn

**IN MEMORY OF
DR. GENE MANUSOV**
Mr. and Mrs. John H. Allen
Dr. and Mrs. Mark A. Collons
Dr. S. Shaun Daneshgar
Mr. and Mrs. Alfred and
Helen Dennis
Ms. Joyce Goldberg
Dr. Roger H. Schuster

**IN MEMORY OF
MS. HELEN HALLORAN
MATTHEWS**
Ms. Patricia M. Okada

**IN MEMORY OF
DR. MARTIN Y. ONO**
Dr. Nolan Maehara
Dr. Richard A. Mays

**IN MEMORY OF
DR. ROBERT REEVES**
Dr. Albert R. Grosnick

**IN MEMORY OF
DR. GLENN D.
RICHARDSON**
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Dr. and Mrs. Donald Kornblau
Dr. and Mrs. Dennis and
Julie Saffro

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BETTY ROMERO**
Dr. and Mrs. Robert K.
Avakian

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DR. ELDOR SAGEHORN**
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Donald and Haideh Lightfoot
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Ms. Angela V. Trivers

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SADIE STRAUSBERG**
Dr. and Mrs. Richard Kahn

**IN MEMORY OF
DR. TOSHIKI TAKEYASU**
Mrs. Sandy M. Takeyasu

**IN MEMORY OF
ELEANOR WEISBAUM**
Dr. Richard Kahn

**IN MEMORY OF
JOE WEIDER**
Dr. and Mrs. Richard Kahn
Dr. Boris Keselbrenner

**IN HONOR OF
DR. SCOTT ADISHIAN,
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AWARD RECIPIENT**
Dr. and Mrs. Robert
Huntington

**IN HONOR OF
DR. CHUNG BUI**
Dr. C. John Dehner

**IN HONOR OF
THE CLASS OF 1962,
DENTAL HYGIENE**
Ms. Marilyn Sweeney

**IN HONOR OF
DR. DAVID EGGLESTON'S
HIKING SCHOLARSHIP**
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Dr. Laura E. Wittenauer
Dr. Richard C. Wittenauer
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Dr. and Mrs. Roy Yanase

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FONTANESI'S RETIREMENT**
Dr. Rex Yanase
Dr. and Mrs. Roy Yanase

**IN HONOR OF
MR. MICKEY KAHN**
Dr. and Mrs. Richard Kahn

**IN HONOR OF
DR. RICHARD KAHN**
Dr. Alexandre Aalam and Dr.
Alina Krivitsky
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Dr. and Mrs. Ralph Allman
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Dr. Vivian Chui
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Dr. Fred Davidowitz
Dr. Robert J. Dent
Dr. Harry L. Dougherty Jr.
Dr. Leon Ellis
Dr. Mark L. Ellis
Dr. Frank Enriquez
Dr. Mark Exler
Dr. Gerald N. Felando
Ms. Marlette Friedman
Dr. Simon Gamer
Dr. and Mrs. Joel Goldenberg
Dr. Estela Goldman
Dr. Richard Gubler
Dr. Janice Handlers-Bryman
Dr. Gary Hartz
Dr. Epifanio Herrera
Dr. Brandon Ho
Dr. Chandler Ho
Dr. Kenneth C. Ho
Mrs. Vicky Ho
Dr. Altaf Hudani
Dr. Donna B. Hurowitz
Dr. and Mrs. Robert Ibsen
Dr. Michelle Ikoma
Dr. and Mrs. John Ingle
Mrs. Marina Jimenez
Mr. Arthur M. Kahn
Dr. and Mrs. Richard Kahn
Dr. Steven Kallman
Dr. Kian Kar
Dr. and Mrs. Sanford Katz
Dr. Boris Keselbrenner
Dr. Michael Keselbrenner
Dr. Tae Kim
Dr. and Mrs. Donald Kornblau
Dr. Ray Kuwahara
Dr. Kuy Ky
Dr. Steven D. Lebowitz
Dr. Janet Lent
Dr. Kevin Edward Lew
Dr. Karen Liang and Mr.
Christian Tu
Dr. John J. Lytle
Dr. John L. Lytle
Dr. and Mrs. Mike Madden
Dr. Naomah Mashhood
Dr. Kevin McWilliams
Dr. and Mrs. Raymond
Melrose
Dr. Ilya Mironov
Ms. Cindy L. Mitchell
Dr. Albert Mizrahi
Dr. Robert Mokbel
Dr. Randee Motzkin
Dr. Michael Mulvehill and Dr.
Suzanne Coulter
Dr. Lily Namsinh
Dr. Mahvash Navazesh
Dr. Manuel Nguyen

Dr. and Mrs. Gordon Pattison
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Mr. and Mrs. Anatoly Sedler
Dr. Marise Sheth
Dr. Robert Shuken
Mr. Steven Silver
Dr. Robert Simon
Dr. Harold Slavkin
Dr. John Sudick
Drs. Mark and Diane Tarica
Dr. Thomas Tate
Dr. and Mrs. Christopher
Truhan
Dr. Alan Ullman
Dr. and Mrs. Leon Unterman
Dr. David Uyehara and Dr.
Donna Arase
Dr. Gerald Vale
Dr. and Mrs. Richard
VanGemert
Dr. Stephen Ward
Dr. Karl F. Wehrle
Dr. Charles Wood
Dr. Peter Wu
Dr. Rex Yanase
Dr. and Mrs. Roy Yanase
Dr. Fary Yassamy
Dr. John Yekikian
Dr. Rizkalla Zakhary

**IN HONOR OF HOWARD
AND MIMI LANDRES 60TH
WEDDING ANNIVERSARY**
Dr. Gilbert T. Katz

**IN HONOR OF
NEWPORT HARBOR
ACADEMY OF DENTISTRY**
Dr. Frank T. Curry
Dr. Donald C. Dornan
Dr. John P. Eriksmoen
Dr. Robert Genc
Dr. Xia Liu
Dr. Richard K. Rounsavelle
Dr. Cherilyn G. Sheets
Dr. John West

**IN HONOR OF
DR. TRAM PHAM**
Dr. C. John Dehner

OBITUARIES



DANIEL KOLZET
Clinical Assistant Professor
of Endodontics

After 27 years as a faculty member at the University of North Carolina School of Dentistry, Dr. Daniel Kolzet left the East Coast for USC in 2004, at which point he became a clinical assistant professor of endodontics. Kolzet, 66, passed away on April 13, 2013. His family has asked Kolzet's colleagues to do one random act of kindness for a stranger—instead of sending flowers—to pay tribute to a man who loved life and people.



JAMES SIMON
Program Director,
Advanced Endodontics
Margaret L. Bemis Professor of Endodontics

Dr. James Simon joined the Trojan Dental Family as a part-time faculty member in 1968, while he simultaneously worked at the Veterans Administration Center in Long Beach, Calif., to create the hospital's first endodontics residency program. In July 2001, he became a full-time professor and program director of advanced endodontics, a position he held until he passed away Feb. 3, 2013.

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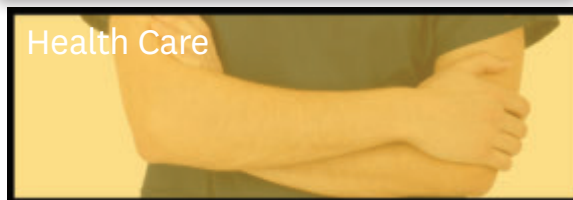
Education



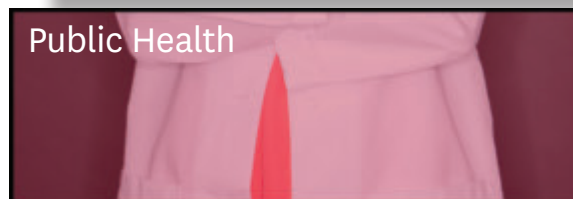
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Health Care



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