Dear UCLA School of Dentistry Community,

Before we look towards the future, I would like to highlight our collective accomplishments during the 2018–2019 fiscal year. Here are a few of the more important figures that stand out. We awarded $4.3M worth of financial aid to dozens of deserving dental students; we received more than $22M worth of contracts and grants in support of our research projects; we provided more than 150,000 patient visits; and our Community-Based Clinical Education program provided more than 10,000 procedures to nearly 6,000 patients.

Aside from these impressive numbers, we also established our Innovative Digital Dentistry systems (iDDS) to help prepare our faculty and students to deliver person-centered care through a digitally integrated health care delivery system. Our general clinics received a $2.5M upgrade with all new chairs and state-of-the-art computers. To supplement our annual revenue, we raised more than $5.4M through donations from our alumni, friends, corporate partners, and foundations. We also established our twelfth endowed chair thanks to a million-dollar gift from Dr. Naomi Ellison ’81 and her husband, Mr. Jim Ellison.

Of course, none of this would be possible were it not for the hard work and dedication of our staff, faculty, students, residents, trainees, alumni, and friends. Please read about more of our accomplishments in the following pages of our 2019 annual report.

Sincerely,

Paul H. Krebsbach, DDS, PhD
Dean and Professor

This icon will appear throughout the report, clicking on it will take you to the article.
SCHOLARSHIPS, FELLOWSHIPS & GRANTS:

Aid from University Sources:

- Dean’s Scholarship & Dentistry Grant Awards: $2,315,733
- UC Regents Scholarship: $58,500

Aid from Outside Sources:

- US Navy Health Professions Scholarship Program: $433,495
- National Health Service Corps: $390,290
- US Army Scholarship: $253,292
- US Veteran Benefits; Post 9/11 GI Bill & Cal Vet Benefits: $218,558
- US Air Force Health Professions Scholarship Program: $204,499
- WICHE: $52,350
- Jack Kent Cooke Foundation: $34,067
- Delta Dental Community Service Grant: $30,000
- The Gene & Marilyn Nuziard Healthcare Scholarship: $10,000
- 2019 Kaiser Permanente eQuality Scholarship: $6,000
- Dental Trade Alliance Foundation Scholarship Award: $5,000
- Hispanic Scholarship Fund: $5,000
- United Nurses Associations of California/Union of Health Care Professionals: $5,000
- VASA Order of America District Lodge Pacific Southwest No.15: $5,000
- The Foundation of the Pierre Fauchard Academy Scholarship: $1,000

Subtotal (Outside Sources): $1,651,351

Total Aid: $4,320,584

Subtotal (Dental School & University Sources): $2,669,233

“One of the best ways the Shapiro family can support higher education is to create endowed scholarships that have a lasting and positive impact for dental student recipients. We are especially passionate about supporting future dentists who are interested in pursuing advanced training so they may provide oral health care to Special Patient Care patients.”

- Peter Shapiro, Shapiro Family Foundation, pictured at center
RESEARCH

The UCLA School of Dentistry has one of the most robust research programs among all U.S. dental schools.

In the 2018 – 2019 fiscal year, the School received over $22M dollars in research contracts and grants, of which more than $8M came from six National Institutes of Health (NIH) agencies. In the last five years, we have been among the top institutions to receive funding from the NIH.

**UCLA is Awarded $5 Million to Develop Tools to Detect Lung Cancer Earlier**

**OCTOBER 2018**

Researchers, led by Dr. David Wong, associate dean for research, in collaboration with the David Geffen School of Medicine at UCLA were awarded $5M over five years from the National Cancer Institute (NCI). The funds support the development of liquid biopsy tools for testing individuals who could have lung cancer — the leading cause of cancer death in the U.S.

The award, one of only six given in the nation, will support this important advancement in the fight against lung cancer.

**Liquid Biopsy Test Receives Regulatory Approval**

**APRIL 2019**

Dr. Wong and his team also received regulatory approval on their EFIRM (electric field-induced release and measurement) technology as a Clinical Laboratory Improvement Amendments (CLIA)-certified, College of American Pathology (CAP)-accredited assay to be used in clinical practice. EFIRM creates a reliable, novel, and impactful method to detect tumor-causing, lung cancer mutations in saliva and blood that is non-invasive, cost-effective, and quick. For the past four years, the technology was in the research and testing phase.

NCI’s support over the years has successfully paid off, as the technology is now approved to be used in medical offices to assist doctors’ diagnoses of lung cancer. The goal is to use results from EFIRM, based on a patient’s saliva sample, to adjust therapeutic strategies in real-time — improving clinical outcomes.

**Grants by Funding Source:**

- **Foundations** $521,812 2%
- **Private/Industry/Clinical Trial** $806,689 4%
- **Higher Education/Subaward** $1,172,240 5%
- **State/Local Government** $9,646,868 44%
- **Federal** $10,010,545 45%

**National Institutes of Health Grants by Agency:**

- **National Cancer Institute** $873,476 11%
- **National Institute of Mental Health** $864,125 11%
- **National Institute of Dental and Craniofacial Research** $5,332,996 65%
- **National Institute of Arthritis and Musculoskeletal and Skin Diseases** $508,492 6%
- **National Institute on Drug Abuse** $211,793 3%
- **National Institute on Alcohol Abuse and Alcoholism** $346,500 4%

**Amount received in FY 2018 – 2019** $22,158,154
Research funded by the National Institutes of Health and other sources has led to the following breakthroughs and oral health advancements in the 2018 – 2019 fiscal year:

**New Class of Membranes Shown to Regenerate Tissue and Bone, Viable Solution for Periodontitis and Wound Healing**

MARCH 2019

Periodontitis affects nearly half of Americans aged 30 and older, and in its advanced stages, it can lead to early tooth loss and more serious systemic diseases. Recent studies have shown that periodontitis can also increase risk of heart disease and Alzheimer’s disease.

A team of UCLA researchers, led by Dr. Alireza Moshaverinia, assistant professor of prosthodontics, has developed methods that may lead to more effective and reliable therapy for periodontal disease — ones that promote gum tissue and bone regeneration with biological and mechanical features that can be adjusted based on treatment needs. The study is published online in ACS Nano.

**New Alternate Cell Growth Pathway Could Lead to Better Treatments for Metastatic Cancers**

JUNE 2019

While researchers have a basic understanding of how primary cancer cells grow, less is known about metastasis, the deadly process by which cancers spread. A team led by Dr. Paul Krebsbach, dean and professor of periodontics, found that mEAK-7, a gene they discovered in 2018, may play a significant role in cancer metastasis, at least in lung cancers.

Building on that earlier gene discovery in human cells, the team compared mEAK-7 expression levels in normal cells and cancer cells using tumor cell genetic information from several databases, as well as tissue samples from cancer patients. They found that mEAK-7, which is important for cell proliferation and migration, was highly expressed in metastatic non-small cell lung cancer. Their findings were published in iScience.

**New Research Could Prevent Jaw Damage for Cancer Patients in Need of Oral Surgery**

MAY 2019

UCLA researchers, including Dr. Ichiro Nishimura, professor of prosthodontics and a member of the UCLA Jonsson Comprehensive Cancer Center, are conducting a new preclinical study that could prevent patients treated for cancer or osteoporosis from experiencing jawbone damage as a result of oral surgery.

Currently, drugs known as bisphosphonates are used to treat patients who have bone cancer or osteoporosis. These drugs bind to the skeleton and prevent a loss in bone density. They remain bound to bones for months or even years after initial treatment. A common side effect of bisphosphonate treatment is osteonecrosis of the jaw, which results in the jaw bone weakening and eventually resorbing.

In a new preclinical study published in Bone Science Direct, UCLA researchers, in collaboration with USC, were able to remove the bisphosphonate drugs from only the jaw bone, not the entire skeleton, by injecting another kind of bisphosphonate compound that is inert and doesn’t have pharmacological effect.

This technique displaced the bisphosphonate drug that was bound to the jaw bone’s surface, which was causing jaw bone loss.

The potential advantage of this technique in a clinical setting is to allow the bisphosphonate drugs to remain bound to the rest of the skeleton, continuing to prevent bone loss, while being displaced from the jaw bone to clear the way for oral surgery.

**Welcome to Dr. Jimmy Hu, Assistant Professor of Oral Biology**

JANUARY 2019

UCLA Dentistry welcomed Dr. Jimmy Hu, who joined the dental school as an assistant professor in the section of oral biology, during the 2018 – 2019 fiscal year. As a stem cell biologist, Dr. Hu is most interested in understanding the basic principles of stem cell regulation and translating that understanding into advances for regenerative medicine.

In 2003, Dr. Hu earned a bachelor’s degree in biomedical science from the University of Auckland in New Zealand, a PhD in genetics from Harvard Medical School in 2012, and most recently he completed postdoctoral work at UCSF.

Hu’s lab focuses on functional roles of tissue architecture and mechanical forces in controlling adult stem cells and tissue development. Through collaborative approaches, his team examines how compressive stress and other mechanical signals are integrated with chemical signaling, nuclear mechanics, as well as genetics, to regulate epithelial (skin layers) stem cells during tooth regeneration and shape formation. Dr. Hu and his research team aim to uncover mechanisms of stem cell-based organ renewal and to eventually apply that knowledge towards clinical applications.
COMMUNITY-BASED CLINICAL EDUCATION (CBCE)

The CBCE program provides valuable clinical care experiences to our dental students in school-based settings, at federally qualified health centers, and at private practices that focus on people living at or below 200 percent of the federal poverty level.

From July 1, 2018 through June 30, 2019, the CBCE program provided care to some of the state’s most vulnerable patients in the following cities: Burbank, El Centro, Indio, Los Angeles, Northridge, Palm Desert, San Fernando, Santa Monica, and Sunland. The program also expanded its reach with an affiliated clinic in Muskegon, Michigan.

Additionally, in a pediatric dentistry residency pilot, seven residents established comprehensive dental homes for 107 children, in a little under two weeks, the residents completed 415 procedures with an estimated treatment value of $62,000 using Denti-Cal FFS rates at the South Central Family Health Center.

The pediatric pilot program was made possible through a $125,000 grant from the American Academy of Pediatric Dentistry Foundation for Pilot Access to Care Replication. The grant was awarded in February 2019 and will support a 1-year pilot. Thank you again to Delta Dental of California for their initial support of a $1.5M gift to launch the CBCE program.

During the 2018 – 2019 fiscal year, our faculty, residents, student dentists, and trainees provided quality dental care at 11 sites across Southern California. Our clinicians administered more than 150,000 patient visits at the following locations:

**UCLA Dental Clinics in Westwood:**
- 4,225 Advanced Education in General Dentistry
- 1,191 BISCO Clinic for Esthetic Dentistry
- 5,892 Pediatric Dentistry Clinic
- 630 Craniofacial Clinic
- 530 Dental Anesthesia Services
- 6,129 Jack & Geraldine Weichman Endodontics Clinic
- 27,006 Faculty Group Dental Practice
- 20,729 General Clinic
- 9,488 Maxillofacial Prosthetics, Advanced Prosthodontics & Special Patient Care
- 5,175 Oral Pathology Lab
- 14,508 Oral Radiology Clinic (includes Tele-radiology)
- 9,908 Oral & Maxillofacial Surgery Clinic
- 1,753 Orofacial Pain Graduate Clinic
- 1,411 Orofacial Pain & Oral Medicine Faculty Practice
- 18,101 Dr. Thomas R. Bales Orthodontic Clinic
- 1,565 Patient Assessment
- 1,957 Patient Screening
- 3,998 Periodontics and Implant Surgery Clinic
- 1,433 Straumann Surgical Dental Clinic
- 914 Ronald Reagan UCLA Medical Center

**Wilson-Jennings-Bloomfield UCLA Venice Dental Center:**
- 4,322 Advanced Education in General Dentistry
- 4,611 General (includes pre-doctoral, hygiene, & ACT)
- 699 Oral Surgery Faculty Practice
- 137 Orthodontics
- 1,744 Pediatric Dentistry

**Additional Clinical Care Sites:**
- 1,235 Children’s Dental Center of Greater Los Angeles (Inglewood)
- 212 Harbor-UCLA Medical Center (Torrance)
- 180 MEND Clinic (Los Angeles)
- 288 Saban Free Clinic (Los Angeles)
- 2,505 Sunset Kaiser Permanente Medical Center (Los Angeles)
- 144 VA Sepulveda (Los Angeles)
- 153 VA Wadsworth/VA West LA (Los Angeles)

**Total visits administered in FY 2018 – 2019:** 152,803

**Care Provided Through CBCE:**
- 10,587 Procedures
- 5,889 Patients Seen
- 11 Number of Sites
COMMUNITY SERVICE

Community Outreach Serves a Dual Purpose

The need for comprehensive oral health care in Los Angeles is vast, with thousands of Angelenos going years without seeing a dentist. The UCLA School of Dentistry works diligently to improve the region’s oral health by participating in alternative clinical settings, such as outreach events, health fairs, and other screening opportunities.

During the 2018 – 2019 fiscal year, nearly two-thirds of our predoctoral student body, dozens of residents, and numerous supervising faculty helped screen more than 2,000 patients and provided nearly 1,500 fluoride applications at 31 events in four counties throughout Southern California. Furthermore, the exposure to real-world situations that our trainees experience is invaluable.

UCLA Dentistry Provides Essential Services to Those in Need at Care Harbor

For the past six years, UCLA School of Dentistry faculty, residents, and student dentists have volunteered their services at the annual mega clinic, Care Harbor, in downtown Los Angeles. The clinic brings together health care organizations from across Los Angeles to provide free health, dental, and eye care to people who are underinsured and underserved.

Pictured to the left is Dr. Edmond Hewlett ’80, professor of restorative dentistry and the School’s associate dean for equity, diversity, and inclusion. Since 2012, Dr. Hewlett has coordinated the dental school’s volunteer cohort and every year, our services and expertise are in high demand.

At the October 2018 Care Harbor, UCLA Dentistry volunteers were among nearly 200 UCLA volunteers who offered essential, basic services to those in need.

INNOVATION

Charting New Territory to Take Us Into the Future

SEPTEMBER 2018

At the beginning of September, the UCLA School of Dentistry officially launched a new unit, the Innovative Digital Dentistry Systems or iDDS. The unit plays an important role in preparing our faculty and students to deliver person-centered care through a digitally integrated health care delivery system in Westwood, local communities, and beyond.

The core mission of iDDS is to lead a digital transformation in dental education and oral health care through creativity, innovation, and research.

Involving digital technology continues to drive innovations and improvements in education, health care, and the process of discovery. In education, these technologies have transformed content management and delivery, access to information, and student assessment. In dentistry, these technologies—electronic health records, diagnosis and imaging, and digital design and manufacturing—have the potential to increase efficiency and accuracy. These advancements are being rapidly adopted in patient care to facilitate workflow and interdisciplinary communication.

Under the leadership of Dr. Benjamin Wu, professor of prosthodontics and the unit’s founding executive director, the innovation driven by iDDS will enable the dental school to rapidly expand collaborations in academia, the dental community, and industry to diversify the School’s patient care, education, and research portfolio.
In collaboration with our faculty, staff, alumni, friends, corporations, and foundations, the UCLA School of Dentistry raised over $5.4M dollars to support our mission of excellence in dental education, research, patient care, and community service.

### By Source:

- **Foundations**: $549,695 (10%)
- **Non-Alumni**: $674,914 (12%)
- **Corporations**: $1,502,092 (28%)
- **Other Organizations**: $174,578 (3%)
- **Alumni**: $2,554,218 (47%)

### By Purpose:

- **Discretionary/ Students**: $678,033 (12%)
- **Faculty**: $1,082,170 (20%)
- **Capital**: $1,407,565 (26%)
- **Program/Research**: $2,292,730 (42%)
- **Capital**: $1,407,565 (26%)

### PRINCIPAL VALUE OF GIFTS & ENDOWMENT FOR FY 2018 – 2019:

- 46% increase in 5 years

### ANNUAL FUNDRAISING FY 2018 – 2019:

- 30% increase in 5 years

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 FINANCIALS

**Revenue by Source:**

<table>
<thead>
<tr>
<th>Fund Source</th>
<th>Fiscal Year 2008 – 2009</th>
<th>% of Total Revenue</th>
<th>Fiscal Year 2013 – 2014</th>
<th>% of Total Revenue</th>
<th>Fiscal Year 2018 – 2019</th>
<th>% of Total Revenue</th>
</tr>
</thead>
<tbody>
<tr>
<td>General Funds and State Support 1</td>
<td>$13,627,553</td>
<td>19.7%</td>
<td>$12,670,217</td>
<td>14.2%</td>
<td>$14,439,058</td>
<td>15.1%</td>
</tr>
<tr>
<td>Other University and Special State Appropriations</td>
<td>$3,250,253</td>
<td>4.7%</td>
<td>$2,432,460</td>
<td>2.7%</td>
<td>$3,265,058</td>
<td>3.4%</td>
</tr>
<tr>
<td>Student Fees and Tuition</td>
<td>$6,243,822</td>
<td>9.0%</td>
<td>$9,240,564</td>
<td>10.4%</td>
<td>$9,695,092</td>
<td>10.1%</td>
</tr>
<tr>
<td>International Programs</td>
<td>$1,292,010</td>
<td>1.9%</td>
<td>$6,792,773</td>
<td>7.6%</td>
<td>$6,233,657</td>
<td>6.5%</td>
</tr>
<tr>
<td>Resident Funding 1</td>
<td>$3,952,165</td>
<td>5.7%</td>
<td>$4,122,822</td>
<td>4.6%</td>
<td>$6,588,578</td>
<td>6.9%</td>
</tr>
<tr>
<td>Contracts &amp; Grants 1</td>
<td>$13,882,849</td>
<td>20.1%</td>
<td>$26,285,977</td>
<td>29.5%</td>
<td>$22,158,154</td>
<td>23.2%</td>
</tr>
<tr>
<td>Gifts and Endowments 1</td>
<td>$2,448,423</td>
<td>3.5%</td>
<td>$3,858,402</td>
<td>4.3%</td>
<td>$6,271,168</td>
<td>6.6%</td>
</tr>
<tr>
<td>Clinics, Faculty Practice Groups, and Continuing Education</td>
<td>$24,339,809</td>
<td>35.3%</td>
<td>$23,717,933</td>
<td>26.6%</td>
<td>$26,929,374</td>
<td>28.2%</td>
</tr>
</tbody>
</table>

Total Revenues: $59,036,884 (100%)

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1. Includes State support
2. Includes Indirect Medical Education, GME resident salaries paid from Ronald Reagan UCLA Medical Center (RRUMC), and Veterans Administration resident funding also paid through the RRUMC.
3. Contracts and Grants reflect dollars received for new and continuing sponsored awards.
4. Gifts and Endowments include new contributions and investment income.
Due to the support and dedication of our alumni and friends, the UCLA School of Dentistry had a lot to celebrate in the 2018 – 2019 fiscal year, including the following highlights:

**Apollonian Society Welcomes First-ever Recent Grad Chair**

**MARCH 2019**

Stepping in to serve alongside Drs. Ronald Mito ’76 and Mo Budak ’74, the dental school welcomed its first-ever Apollonian Society recent graduate co-chair, Dr. Michelle Okamoto ’13. In this role, Dr. Okamoto has been working to engage with recent graduates who are looking to stay connected with UCLA Dentistry and raise funds to support the next generation of student dentists.

Since graduation, Dr. Okamoto has remained involved with UCLA Dentistry by attending events through the UCLA Dentistry Alumni Association and the UCLA Bay Cities Alumni Chapter. She is an Apollonian Society Member and also serves as a guest speaker for an annual lecture on professionalism for the first year dental students. She currently works as a general dentist in Torrance, California alongside her father, Dr. Steve Okamoto ’84, who is also a member of our Board of Counselors.

During her first year of service, Dr. Okamoto has already brought energy to this new position, providing a vital link between the School and the community, encouraging alumni and friends to support the Apollonian Society, and enhancing the student experience.

**Ensuring the Future Growth of Restorative Dentistry**

**APRIL 2019**

Dr. Naomi Ellison ’81 and her husband, Jim Ellison, established the Naomi and Jim Ellison Endowed Chair with a $1 million gift. The chair will be used to recruit and retain star faculty to practice and teach restorative dentistry. The donation establishes the twelfth endowed chair at the dental school and the third in the past five years.

Dr. Ellison made her first gift to the dental school when she was still a student, to support a subsidy fund for patients from underserved populations. Her desire to give back to her alma mater continued as she built a successful private practice. During this time she also held several leadership positions within the dental field, including with the California Dental Association.

Dr. Ellison has also elevated the dental school through decades of counsel and philanthropic leadership, including through her service as chair of the UCLA School of Dentistry’s Board of Counselors for the past 25 years. Over two decades of service, she has helped raise more than $55M to support UCLA Dentistry’s mission for excellence in dental education, research, service, and patient care.

**UCLA School of Dentistry Surpasses its $35M Centennial Campaign Goal**

**MARCH 2019**

When UCLA Dentistry announced its $35M goal for the Centennial Campaign for UCLA in 2014, it was the most ambitious target of any fundraising effort led by the dental school to date. In the 2018 – 19 fiscal year, the UCLA School of Dentistry surpassed the goal ahead of schedule, in large part due to support from the Board of Counselors (pictured at left).

During the campaign, UCLA Dentistry has received more than 5,300 gifts and pledges. The gifts are already being used to support students and faculty, and endeavors that improve oral health for communities in California and around the world.
Improving Patient Care through Infrastructure Improvements

JUNE 2019

Through a multi-phased, cross-unit project, nearly all of the operatories located in the general clinics on the second and third floors now house new dental chairs and corresponding equipment. Additionally, all clinic operator computers were replaced with faster units, improving the efficiency of axiUm, the dental school’s patient records software; and card tap readers were also installed, replacing the swipe card readers. The last time the general clinic’s operatories had been upgraded was in the late 1990s. This $2.5M project, funded by the dental school’s dean, Dr. Paul Krebsbach, was a necessary upgrade needed to maintain the high caliber and quality of training that is expected at the UCLA School of Dentistry. The new, state-of-the-art dental equipment is intended to improve student and patient experiences in our clinic.

The entire project took over a year to plan and in order to minimize the impact on our clinic operations, it was executed in only three weeks. Several units at the dental school collaborated to successfully complete this very complex project, including Dr. Paulo Camargo, associate dean for clinical affairs; Lisa Gotori-Koga, facilities planning manager, who supervised the removal and installation of equipment; Grant Yano and Jose Ramirez, IT services, who removed and installed computers and tap card readers; and Raman Chohan and Cheryll Andico, with DGIT, who managed ID badge replacements.

Thank you to our corporate partners, Midmark, A-dec, Acteon, and Bien-Air for working on a tight deadline to replace the equipment.