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Loma Linda University Dentistry - Volume 22, Number 2

Loma Linda University School of Dentistry

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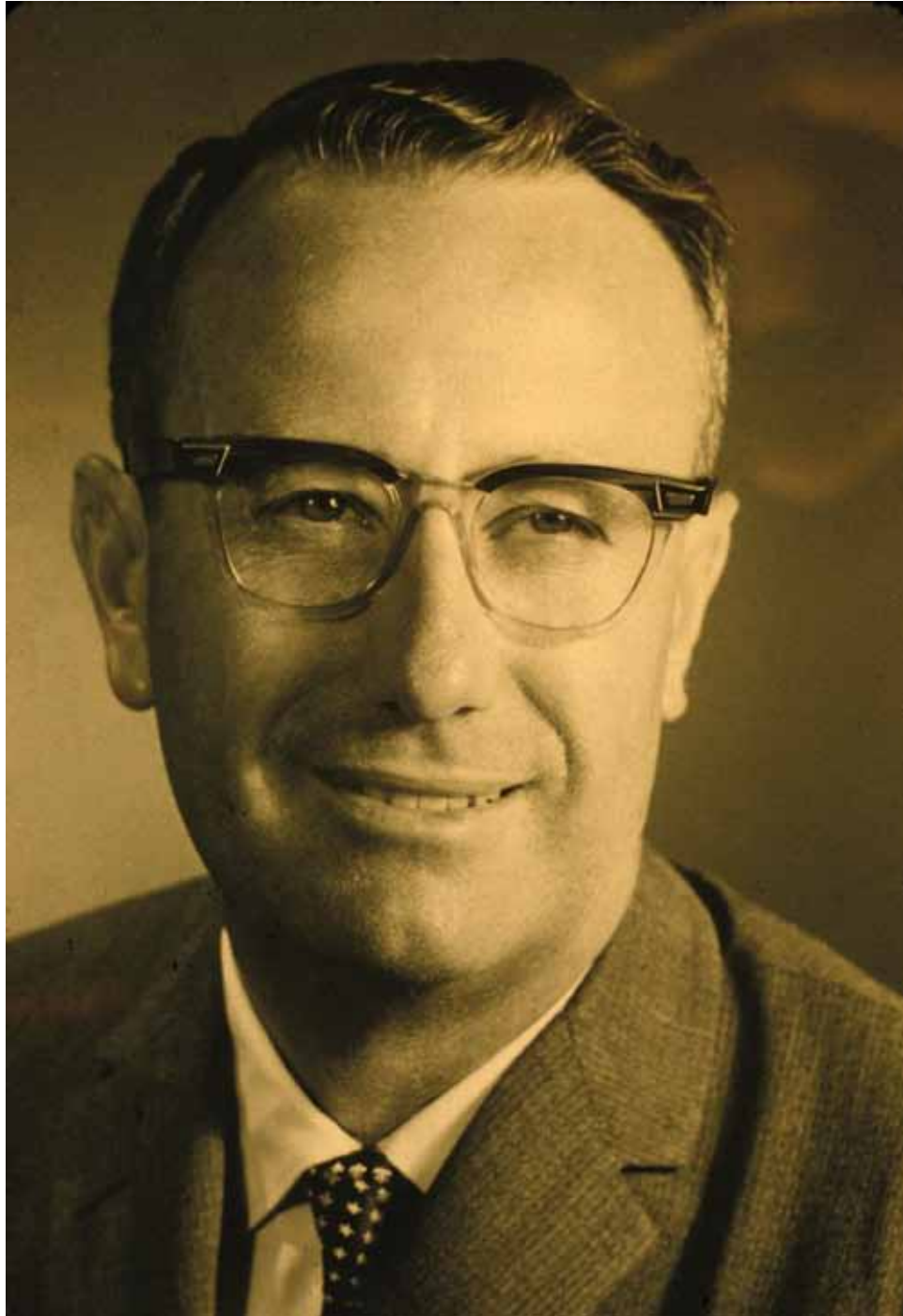
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Dentistry



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LOMA LINDA UNIVERSITY DENTISTRY

VOLUME 22, NUMBER 2 SUMMER/AUTUMN 2011

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Mission

Loma Linda University School of Dentistry seeks to further the healing and teaching ministry of Jesus Christ by providing an environment wherein:

Students learn to provide high quality oral healthcare based on sound scientific principles

Patients receive competent care, which is preventive in purpose, comprehensive in scope, and provided with compassion and respect

Faculty, students, and staff value the patient relationship, respect diversity, and share responsibility by working together toward academic, professional, spiritual, and personal growth

Scholarly activity and research provide a foundation for evidence-based learning and enhance whole person care

The workplace environment attracts and retains a superior and diverse faculty and staff who motivate, educate, and serve

Our communities (local, global, and professional) benefit from our service, stewardship, and commitment to life-long learning.



Bangladeshi citizens line up for services from the Loma Linda University School of Dentistry service learning team that provided dental services in that Asian nation over spring break (page 14).

Purpose

Loma Linda University Dentistry informs alumni, faculty, students, and other interested individuals about current School programs, events, and activities, as well as accomplishments of fellow alumni, faculty, and students. The journal is published twice each year by Loma Linda University School of Dentistry.

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**Cover: Charles T. Smith, DDS, Dean, School of Dentistry
1960-1971**



WHAT CREATES SUCCESS?
8

SPRING MEND
14

ALUMNI STUDENT CONVENTION
18

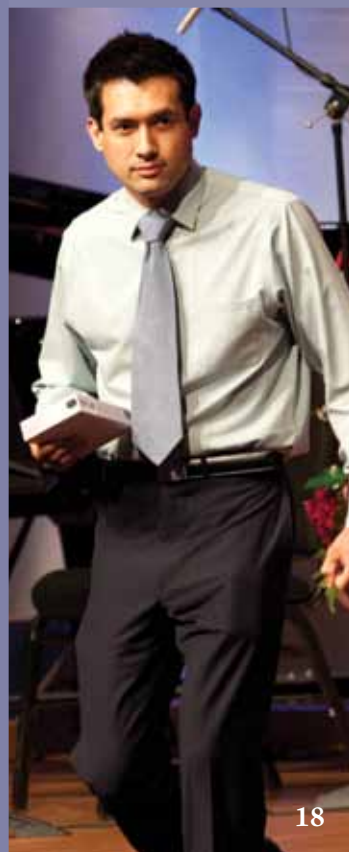
STUDENT RESEARCH SUCCESS
30

COMMENCEMENT 55

35

QUEST FOR WHITER TEETH
38

ELLIS JONES: CARTOONIST EMERITUS
61



Dean's message:

Focus on excellence

Loma Linda University School of Dentistry is focused on providing students with an exceptional, broad-based clinical experience in an environment where spiritual values are an essential component of the curriculum. Clinical experience is gained both within the School of Dentistry and at many sites located in national and international communities. The School continues to be deeply involved in the development and use of electronic education programs that provide students with unique opportunities to learn while simultaneously serving as resources for review and self-assessment. The clinical education program is evidence-based, incorporates advanced technologies in patient care, and correlates the basic, clinical, and behavioral sciences.

Our ongoing commitment to clinical and foundational research provides students with rich opportunities to grow intellectually and work with outstanding faculty.

Our faculty and staff are committed to maintaining an atmosphere of service where students not only acquire



knowledge and competence in technical and clinical skills, but also develop management skill and the ability to exceed the expectations of patients.

I invite you to learn more about our clinical services, programs, and our exceptional family of students, faculty, and staff.

Charles J. Goodacre, SD'71, MSD
Dean

School of Dentistry Electronic Resources



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Electronic Resource information available at: <http://www.llu.edu/dentistry/cde/electronic-resources.page?>

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Alumni president's message:

Did you know?

... that you have several ways of supporting the Alumni Association? Of course, you can always send in a check, earmarked for the Annual Fund, but there are other ways. You can send your scrap gold to us, and we'll assay it, professionally value it, and send you a tax-deductible receipt for your donation. You can also purchase alumni gear on the Alumni Association's website (see page 17). We have beautiful watches embossed with the School of Dentistry insignia, license plate frames, scrubs, and several other items. We don't make much profit on these products, but every little bit helps. To slightly paraphrase an old business joke, "We hope to make it up in volume."

... that the Alumni Association is an active supporter of the University's motto, "To Make Man Whole"? The Bibles and white coats funded by the Annual Fund are awarded each February, during the Student Dedication ceremony. The University Church is filled to capacity with family and friends bearing witness to the students dedicating their education and professional life to Christ. For the last two years, it has been my honor to represent the Alumni Association by assisting the students in donning their new coats.

... that the students are the ones who benefit from your Annual Fund donations? Each year, the Alumni Student Loan Fund awards hundreds of thousands of dollars to D3 and D4 students. The default rate is amazingly low on these loans, and the students who receive them are very grateful. The Annual Fund also supports student participation in mission (service learning) dentistry. I know many of you have great memories of your national and international



trips, and now you have a chance to make certain that third millennium students get that opportunity.

... that faculty and alumni can participate in the international service learning trips? I recently went to Brazil with a group of eight dental students (see page 14). We provided care to almost 300 patients in remote Amazon villages during the eight days we were there and found the trip both professionally and personally gratifying.

To support your Alumni Association and the Century Club projects, please send your check or gold scraps to:

Alumni Association
 LLU School of Dentistry
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 Loma Linda, CA 92354
 909-558-4399
jlflower@llu.edu

Greg Mitchel, DDS
 President, Alumni Association



From left to right (standing): Deeb Alribani, IDP'11; Ali-reza Etemadiab, IDP'11; Michael Fitzpatrick, SD'87, professor IDP; Gregory Mitchell, SD'84, director IDP; Hayffa Jamal, IDP'11; Michael Potts, SD'75A, assistant professor Implant Dentistry; Chantal Ngo Bikoi, IDP'11; Derek Potts, SD'11; Jose Wu, IDP'11. From left to right (kneeling): Emad Bishay, IDP'11; and Dr. Sarah Elraba, IDP'11.

Dentistry Journal questionnaire

The School of Dentistry is taking advantage of advances in digital media and the growth of social networking, made possible through internet connectivity, to increase the options that alumni and friends have to remain connected with the School and with each other.

The LLUSD biennial reports, first published in 2008 and again in 2010, are available at:
<http://www.llu.edu/dentistry/news.page?>

Biannual editions of the School's alumni journal, LLU Dentistry, are available online at:
<http://www.llu.edu/dentistry/news.page?> (and scroll to the bottom of the page)

More frequent updates regarding life at the School may be viewed at:
<http://www.llu.edu/dentistry/index.page>

Opportunities to view news, photos, and less formal notices about life at LLUSD and the chance to respond in the same venue are available at the School's Facebook page:

<http://www.facebook.com/LomaLindaUniversitySchoolofDentistry>

As twenty-first century media transitions from paper to digital continue, your Alumni Association can serve you better by knowing how you prefer to remain advised of the School of Dentistry's functions and progress.

Please take a moment to respond to this brief questionnaire regarding the two publications that have been sent in the past to all School of Dentistry alumni:

- Please continue sending me the paper version of *Dentistry* and *Biennial Report*.
- Please email me the links to *Dentistry* and the *Biennial Report*
- You don't need to send me anything. I regularly will visit the School of Dentistry's website—
www.dentistry.llu.edu—to get my news about the School.

Name _____ Year _____ Email _____

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 Program

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Employment Opportunities Postings

Find or post employment opportunities online through the LLUSD Alumni web page

www.llu.edu/dentistry/alumni

Anyone who wishes to sell a practice, lease space, or seek associates or staff members is invited to post those opportunities on our newly revised "Employment Opportunities" area accessible through the LLUSD Alumni Page pictured below.

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Employment opportunity postings will remain online for six months or until filled or outdated.

These postings are on an external web site and available to the public.

What is it that creates success?

The impact a school of dentistry has upon the public and the profession is largely realized through its faculty and students. Loma Linda University has been blessed with an incredible heritage of committed, innovative faculty and students who have made many positive contributions. It is fitting to identify some of the accomplishments, not for the purpose of promoting the school, but to appropriately recognize those who have given so much. What follows are 10 "firsts" listed by the decades during which they occurred. They serve as reminders of what can be done through dedication and hard work.

Firsts from the 1950s and 1960s

1. Niels Jorgensen, DDS, developed the first intravenous sedation technique used in dentistry, a technique that dramatically enhanced the comfort of patients and the ease with which patients could have complex surgical and dental treatments performed.
2. Dr. Niels Jorgensen and Jess Hayden, DDS, published the first textbook describing the anatomy and clinical procedures associated with local anesthesia as well as conscious sedation and general anesthesia. Dr. Jorgensen also produced the first 16 millimeter movies showing students and practitioners how to provide effective and comfortable local anesthesia. In 1965, his film, *Inferior Alveolar, Lingual, and Buccal Nerve Block*, won the "First Grand Prix" award at the International Dental Film Competition in Paris, France.
3. In 1967, under the leadership of Ronald Buell, DDS, the advanced education program in endodontics was established as the first endodontic specialty training program in the State of California and only the second such program west of the Mississippi River.
4. Dr. Lloyd Baum and Virgil Lau, SD'60, developed a paralleling device in 1958 that allowed pins to be precisely aligned with each other for longer lasting, more accurate restoration of teeth.
5. Drs. Lloyd Baum and Melvin Lund developed a refractory mold material in 1960 that allowed for the accurate casting of gold crowns without using the sometimes challenging process of removing a wax pattern from a die.
6. A porcelain inlay investment was developed by Robert Kinzer, SD'58, along with dental students Dean Bonlie, SD'62, and Kenneth Mertz, SD'62. This new material allowed for easier and more accurate fabrication of tooth-colored porcelain fillings.
7. Gold foil fillings have always been recognized for their outstanding durability. However, the clinical procedures were quite time consuming and difficult, thereby limiting their use. A powdered gold material known as Goldent was developed in 1963 by Dr. Lloyd Baum with the assistance of dental student William Outhwaite, SD'65. This innovation enhanced the ease and cost-effective nature of using these types of fillings.
8. When gold foil fillings were used in the front teeth, they often were visible and patients did not always like the final appearance. A conservative and esthetic lingual approach technique was developed at Loma Linda by Harold Schnepfer, DDS, in 1960 that allowed for the placement of these very long-lasting, gold fillings in a manner that they were not visible.
9. Two School of Dentistry students, Gary Gregory, SD'68, and Raymond Rawson, SD'68, produced the first movie that showed molten gold flowing into a mold. Their research improved the profession's understanding of the casting process so that higher quality restorations could be made for teeth. These individuals also were guided in this project by Dr. Melvin Lund, then chair of the Department of Restorative Dentistry.
10. Roland Walters, SD'57, chair of the Department of Orthodontics, developed and introduced the first use of computer-aided cephalometric analyses that enhanced orthodontic diagnosis and treatment planning.

Dr. Niels Jorgensen developed the first intravenous sedation technique used in dentistry, a technique that dramatically enhanced the comfort of patients.

Firsts from the 1970s and 1980s

1. It was 1976 when Loma Linda established the world's first University-based specialty training program in implant dentistry under the leadership of Robert James, DDS. This program was started well in advance of the time other schools would recognize the impact this aspect of dental care would eventually have on the esthetics, comfort, and function that patients would be able to enjoy.
2. In addition to the implant dentistry program, the School of Dentistry started an Implant Dentistry Study Club with one-on-one teaching in the 1970s that subsequently evolved into a group program. During the first 30 years this program was in existence, over 700 practicing dentists expanded their knowledge of the science and clinical procedures associated with dental implants through this novel year-long, part-time program.
3. While serving on active duty during the Vietnam War, oral surgeon Philip Boyne, DDS, was involved in the facial reconstruction of many injured soldiers. During this time he developed a keen interest and special expertise in the required surgical procedures that led to his pioneering work with bone grafts and the use of different materials that could be used to enhance the replacement of missing bone.
4. A hinge axis recorder was developed by Dr. Lloyd Baum in 1970. The unique design of this device, requiring use of only the mandible, made it easier for clinicians to record the opening and closing axis of the jaw for patients in need of extensive oral rehabilitation.
5. The attachment of the peri-implant mucosa to a dental implant was first described by Dr. Robert James. This hemidesmosomal attachment of the soft tissue is what helps to maintain the health of the tissues surrounding dental implants.
6. Loma Linda developed the technique whereby the radiographic data from a CT scan could be used to create a 3-D replica of the jaw bone, allowing for more accurate anatomic evaluation and aiding surgical planning. This

Two School of Dentistry students, Gary Gregory and Raymond Rawson, produced the first movie that showed molten gold flowing into a mold.

Loma Linda developed the technique whereby the radiographic data from a CT scan could be used to create a 3-D replica of the jaw bone.

landmark work was pioneered by Dr. Robert James and one of his residents, Philip Truitt, SD'76. The process has now become a routine procedure used in dentistry and medicine to plan complex surgical procedures in advance of the surgery. In dentistry, it has also provided the anatomical information required to fabricate more accurate treatment devices and prostheses for the replacement of missing teeth.

7. The first cable drive pin wrench was invented by Dr. Lloyd Baum and Douglass Roberts, SD'66, to improve the ease and accuracy of placing pins for the retention of large fillings in teeth.
8. The first peer-reviewed paper describing the technique of bone grafting in the maxillary sinus was published by School of Dentistry faculty members Drs. Philip Boyne and Robert James. This new technique has allowed thousands of patients to receive dental implants that previously would not have been possible.
9. Under the leadership of Roland Walters, SD'57, Loma Linda was the first dental school to adopt the Bioprogressive Technique developed by Robert Ricketts, DDS, that has enhanced orthodontic treatment of generations of patients.

Firsts from the 1990s and 2000s

1. Mahmoud Torabinejad, DMD, MSD, PhD, researched and developed mineral trioxide aggregate (MTA), a material that has received world-wide acclaim because of its ability to save teeth that previously would have been lost.
2. Dr. Philip Boyne pioneered the first use of a cytokine (BMP-2) for bone grafting in animal research, and he and Alan Herford, SD'94, MD, also pioneered research using it in humans. This material promotes the formation of bone, and is particularly valuable for patients with bone deficiencies in their jaw(s) and those who are missing parts of the jawbones.
3. A special transport device was developed by Dr. Alan Herford for use with distraction osteogenesis, a process that allows bone to be generated using the body's own response to an injury. This technique has permitted patients to be treated and returned to normal oral

function who previously would not have been treatable to the same level of normalcy.

4. A product named BioPure (MTAD) was developed by Dr. Mahmoud Torabinejad. This endodontic disinfectant helps to enhance the success of root canal treatment.
5. Under the direction of Gerald Winslow, PhD, Loma Linda University was the first institution to offer a combined degree program where students earned a dental degree and a master of arts degree in ethics. Several students have completed this program with one graduate, Polly Sprague, SD'96, writing a regular ethics column for the journal of the Academy of General Dentistry for which she won a national award from the American Association of Dental Editors. Loma Linda University also became the first home for the executive offices of the American Society for Dental Ethics (ASDE). The first executive director was Ms. Kristi Wilkins, current chair of the Department of Dental Hygiene. The current director is Ms. Anika Ball, also an alumnus of the dental hygiene program at Loma Linda University.
6. Loma Linda became the first dental school in the United States to install and use a cone beam CT scan machine as a result of the work of Joseph Caruso, SD'73, chair of the Department of Orthodontics and Dentofacial Orthopedics.
7. Under the direction of David Anderson, SD'70, John Leyman, DDS, and Larry Trapp, DDS, the advanced education program in dental anesthesiology became not only the largest such program but also one recognized for the outstanding education and experience residents receive.
8. The School of Dentistry developed the first interactive, navigable, nonlinear dental education program in dentistry that substantially enhances the education of students and practitioners. The first program was developed by Jaime Lozada, DDS, in the year 1999 and then cooperatively enhanced by Dr. Lozada and Charles Goodacre, SD'71, MSD. The result of their work was a CD-ROM program produced during 2001. It has been effectively used to teach dental students about implant dentistry since that time, and it is regularly revised to reflect new science and technology. In 2003, the School of Dentistry produced the first CD-ROM regarding *Tooth Preparation and Associated Clinical Procedures*. Both the Implant Dentistry and Tooth Preparation programs grew in size and scope to become DVDs that are widely

The School of Dentistry developed the first interactive, navigable, nonlinear dental education programs in dentistry that substantially enhances the education of students and practitioners.

used throughout North America in the education of dental students and dental specialty students. Additional programs were developed in conjunction with Brown and Herbranson Imaging, based at Stanford University, and introduced the first 3D educational programs for the teaching and learning of tooth morphology and dental occlusion. These programs are widely used in the education of dental, dental hygiene, and specialty education students.

9. Faculty and students in the advanced education program in implant dentistry have published several papers that represent "firsts" in their field. Joseph Kan, DDS, published the first article describing the technique used for placement of a single dental implant and immediately placing a tooth on the implant for the esthetic, functional, and biologic benefit of the patient. Kitichai Rungharassaeng, DDS, MS'98, Dr. Lozada, and Dr. Kan published the first prospective evaluation of immediate loading for mandibular overdentures using peri-implant parameters. Dr. Kan published the first paper describing the use of computer guided implant surgery for the esthetic replacement of single teeth. Andre Gomes, DDS, Dr. Jaime Lozada, Nicholas Caplanis, DDS, MS'96, and Alejandro Kleinman, DDS, published the first article describing the immediate loading of a single implant in the maxillary premolar area. Istvan Urban, DDS, Dr. Caplanis, and Dr. Lozada published the first clinical report of the use of recombinant human platelet-derived growth factor (rhPDGF-BB).
10. Dr. Joseph Caruso, chair of the Department of Orthodontics and Dentofacial Orthopedics, led the development of an implant education program for orthodontics. As a result, Loma Linda University became the first dental school to require implant experience as part of the specialty education program in orthodontics.

The accomplishments presented above should challenge and at the same time encourage all oral healthcare professionals to make a difference through their practices, teaching, research, involvement with organized dentistry, and activities in their local communities.

And by the way, it is people that create success.

Alumni Association Board of Directors transitions

Each annual Alumni Student Convention is the occasion for School of Dentistry Alumni Association board member transitions.

Six of the twenty-one board members completed three-year terms in February and were replaced by six new members whose terms of service will conclude in 2014.

pleasure. I have gotten to know many alumni that I didn't know previously, and developed friendships through these working relationships. Board members give input to the February Alumni Convention activities, decide on the distribution of Annual Fund donations, and participate in various activities at the School of Dentistry. Watching the



Dr. Tom Thompson hands the ceremonial gavel to incoming president Greg Mitchell.

Among the six new board appointments is the 2011 Alumni Association president Gregory Mitchell, SD'84, director, International Dentist Program, who replaced in that office outgoing president Tom Thompson, SD'60, MS'64.

Kathleen Moore, MHIS, associate dean, Dental Education Support Services and director, School of Dentistry Alumni Association, says, "Working with the Alumni Association Board of Directors is always a

thought that goes into each individual's decision during votes on various actions is very rewarding. I have been blessed by my association with the Board, and the School has been rewarded by the thoughtful actions of this group."

In addition to Dr. Mitchell's appointment, new board members include Lewis Cox, SD'83; Ken Fowler, SD'84; Shelley Hayton, DH'82; Kevin Kuniyoshi, SD'97; and Nithin Nirmal, IDP'07.

Alumni service survey elicits stories

Founded to provide an academically excellent dental education in a faith-based setting, LLUSD now has over 6,000 graduates. Are these graduates fulfilling the School's distinctive purposes? Were they inspired to pursue a service-oriented professional path with specific concerns for those unlikely to receive oral health care?

Surveys distributed in 2009 to the alumni assessed participation in spiritual and service activity. A total of 715 returned surveys now offer a profile of the respondents. Of the 715, 163 alumni reported a total of 8,393 hours of pro-bono dental work performed. Additionally, 100 had participated in 13,801 hours of international service; 204 had donated 15,751 hours to local community service, and 528 reported active involvement in a faith-based institution.

Fresh memories of a trip to Chad prompted Merlin Ekvall's, SD'75A, MS'91, response to the survey. After 13 years of dental mission service in Taiwan, plus multiple short-term trips to Papua New Guinea and Peru, he says his three weeks in Chad presented the most severe cases he had ever seen: people with swollen faces, many infections; scars from old abscesses that had burrowed to the external face, had been suffered through, finally draining and allowed to heal without the benefit of antibiotics. Several patients were so swollen and infected that they had to be admitted and placed on intravenous antibiotics before extractions could be accomplished. The local people preferred to use frayed sticks to toothbrushes, and many used neither. In the Bere Adventist Hospital dental clinic (two empty chairs except when volunteer dental professionals visit), the hospital's administration charges about 90 cents (equal to a day's wage) for registration and health card, more than some patients could pay. The health card is like a patient's chart that they carry in their possession.

Observing their great need, Dr. Ekvall worked in an office without electricity. Headlamps served for light. When it was necessary to use an electric drill, someone was sent to fetch a small generator that had to be shared between several departments in the hospital. Referring to the people, Dr. Ekvall says, "They just suffer," unable to afford the services at a sole French doctor's office two days' walk away. To reach distant patients, Dr. Ekvall's team held several clinics in the bush. He would like to go again, and he believes a trip to Chad would be a rich experience for School of Dentistry students.

When Jessica Horricks (Kaufmann), SD'08, joined her

father's dental practice, she retained the Horricks name professionally at the office of Donald Horricks, SD'80, because the name spells "dentistry" to the residents of Wyoming, Ontario. There, in addition to his practice, Dr. Horricks joins his wife in conducting numerous CHIP (Coronary Health Improvement Project) workshops; he has also performed dental care at remote locations: Guatemala (four times), Peru (three times), Tanzania, Ecuador, Dominican Republic, Raotua, San Lucia, and Russia (twice).

Before Jessica Horricks entered dental school, her father was including his family on his mission trips. Thus beginning at the age of 10 or 11, Jessica was receiving what she calls "good exposure" to the mission aspect of dentistry. "I learned a lot

about injections and extractions before I went to dental school," she says. Four mission trips during her LLUSD education—to Honduras, St. Lucia, Guatemala, and El Salvador—confirmed her commitment. Soon after graduation she was with her father again, this time in Peru as a mentor to 18 LLUSD students. "This mission service," she notes, "is a big part of my total experience." The Horricks join an honorable cadre of alumni who are extending dental care to the underserved of the world. The mission objectives of the School's founders are being met.

Key to adjacent page

- A. *Dr. Horricks (in bat) with his wife and ten LLUSD students in El Salvador 2007*
- B. *Dr. Don Horricks checks in on Dr. Jessica Horricks assisted by her husband Josh Kauffman, DPT.*
- C. *Flashback: Jessica Horricks assists her father on St. Lucia in 1994.*
- D. *Dr. Horricks is surrounded by 2008 LLUSD dentistry graduates who have gone with him on mission trips (L-R): Tara Ericson, Christine Son, Jessica Horricks, and Elisa Song.*
- E. *Entrance to Bere, a district of about 60,000 people, in the country of Chad*
- F. *Confidentiality is not an issue, as Dr. Ekvall operates.*
- G. *Commitment memorialized at a river baptism.*
- H. *Children of Bere enjoy seeing themselves on Dr. Ekvall's video camera.*

In the Bere Adventist Hospital dental clinic, the hospital's administration charges about 90 cents (equal to a day's wage) for registration and health card, more than some patients could pay.



Spring mend

Service Learning Trips enhance LLUSD students' spring break

While many American students were going wild on the beaches of warm latitudes, seven service learning groups from LLU School of Dentistry (81 team members) provided oral healthcare to underserved people around the globe—in Bangladesh, Brazil, Guatemala, Honduras (two teams), Los Angeles, and New Mexico. A brief overview of the teams' activities follows.

Bangladesh

Bolstered by fellow faculty leaders Paul Yoo, DDS, assistant clinical professor, Dental Education Services; Kenneth Lim, DDS, assistant clinical professor, Dental Education Services; and Carlos Moretta, SD'01, assistant professor, Oral and Maxillofacial Surgery, led 14 LLUSD students (four DHs, one D1, four D2s, and five D3s)—what Dr. Moretta called a “world class wrecking crew”—halfway around the world for a week at the 22-acre SDA Kellogg-Mookerjee Memorial Seminary (school and orphanage) at Gopalgini, in the People's Republic of Bangladesh, bordered on three sides by India and a small border with Myanmar.

The 26-hour trip included a several-hour layover in Dubai, and the contrast between the decadence of the glittering capital of the United Arab Emirates (where stands the world's tallest building) and Dhaka, the third-world capital of Bangladesh, was jarring. From the airport with no air conditioning, a six-hour ride in what students termed “a rickety old bus” conveyed the dental team to the Adventist campus where they treated approximately 1,500 patients in four-and-a-half days. (People would assemble at midnight, waiting without food or water, in hopes of receiving care when the day arrived.)

Four hygiene students were limited to ten minutes per patient, patients who presented immense calculus and beetle nut stains. They mostly cleaned just the upper and lower



An all too common Bangladeshi Beetlenut smile

anterior—work that without the Cavitrons would hardly have been possible.

The ten dental students found themselves pulling teeth, doing oral surgery, restorations, and cleanings. Twenty volunteers from the Adventist college served as translators and facilitated communication.

Despite bathrooms that were little more than holes in the ground, and sharing the river with the “bloated and dead floating carcasses of a cow and several goats,” participants raved about the “irreplaceable dental education obtained on this trip,” the gain of “enormous confidence” in performing a variety of clinical procedures, and the encouragement of “awesome” faculty leaders.

Brazil

A service learning trip to Brazil led by Greg Mitchell, SD'84, director, International Dentist Program, Michael Fitzpatrick, SD'87, professor, Restorative Dentistry, and Michael Potts, SD'75A, adjunct assistant professor, Restorative Dentistry, launched seven IDP (and one D4) students on a trip that included eight days on the Amazon River.

This team of comparatively experienced dental students saw 275 patients and performed at least 770 procedures that included more than 400 extractions. As Dr. Mitchell explained, “The remote villagers have adopted a Western diet, but no Western oral hygiene. We saw 24-year-olds with bombed out molars. Every hut has a satellite dish,” he reported, “all of them positioned straight up. Gasoline generators run two to three hours, and villagers run to huts to watch television. And as a result of watching TV, the villagers (even with just a few teeth) want bleaching and acne medication.”

Team members reported unusual difficulty performing tooth extractions, due to the bone density of the villagers' teeth. One student fainted in the equatorial heat and humidity after trying for more than an hour and a half to remove a recalcitrant tooth.

The sleeping in hammocks, the sight of dolphins jumping in the river, the alligators lurking, and monkeys jumping from tree to tree made the LLUSD team feel as if it was in a National Geographic special. Alligator hunting was a highlight of the trip for some students.

Guatemala

One School of Dentistry faculty member, Kim Nordberg, DDS, PG'80, PG'82, an adjunct assistant professor, Dental Education Services, joined Mike Roberts, DDS, a Simi Valley private practitioner, three LLUSD dental students (two D2s and a D3) and a group of 12 UCLA students on an eight-day service learning spring break to Guatemala organized by the non-profit agency, Help the Children.

Dr. Nordberg oversaw two chairs assigned to three LLU students. Two would be doing procedures while one assisted.



IDP senior student Jose Wu examines a young patient. An Argentine native, fluent in Portuguese, Jose was invaluable as a translator.

Meanwhile, Dr. Nordberg was floating between students answering questions and giving start checks. The other eight or nine chairs were taken by the dozen UCLA students, and supervised by the general dentists, oral surgeon, periodontist, or pediatric dentist who accompanied them.

One Wednesday the group was excused from duty to visit Antigua, the ancient capital of Guatemala. Local dignitaries not only arranged transportation and security for the visiting oral healthcare teams, but honored the group Saturday morning at the Guatemalan Museum of Antiquities.



Ally Kim, D3, employs the suction device even as she holds a young Guatemalan patient's hand.

Honduras I (Valle de Los Angeles)

Residents in two areas of Honduras received oral healthcare from disparate teams of LLUSD faculty and students.

Last year LLU medical students adopted a clinic and invited nursing students and first year dental students to join them. As a consequence of that experience, the dentistry class of 2013 adopted the Hospital Adventista de Valle de Los Angeles about 15 miles northwest of Tegucigalpa, the Honduran capital with, as one student described, "its many gift shops and endless supply of stray dogs."

This year ten second-year students went to Valle de Angeles with Neal Johnson, SD'10, PhD, assistant professor, Oral Diagnosis, Radiology, and Pathology, and, with the assistance of two indigenous dentist and interpreters, treated 300 to 400 patients who had severe tooth decay and



Rachel Tanbunan, D2, and Peter Park, D2, use sock puppets to teach children in Valle de Angeles to care for their teeth.

periodontal disease with extractions, cleanings, and fillings.

They provided fluoride treatments and education in oral care by way of a puppet show to hundreds of children at schools in Valle de Angeles and in nearby Tegucigalpa. The opportunity to teach young children to care for their teeth led one student to mention his motto, "It's better to prevent than to lament."

This service trip enabled second year dental students to do Class 1 amalgam and Class 1 composites and a variety of anesthetic injections.

Honduras (Roatan)

At this service-learning venue, communication was easy, because Honduras was once a British colony.

Four School of Dentistry clinical faculty, Drs. Bonnie Nelson, SD'88, chair, Department of Pediatric Dentistry; Steven Morrow, SD'60, MS, professor, Department of Endodontics; V. Leroy Leggitt, SD'84, MS'92, PhD, professor, Department of Orthodontics and Dentofacial Orthopedics; Richard Parker, SD'68, MS, associate clinical professor, Dental Education Services; a dental hygienist; a dental manager; and three D3 dental students comprised the team that provided dental services to the residents of Roatan, Honduras. The mission is organized by the Calimesa Seventh-day Adventist



Mark Wierenga, D3, stands amid highly portable PCV dental chairs on a Roatan beach front veranda.

Church to share God's love through health education, dentistry, children's ministries, and facility development in the Roatan communities of Camp Bay and Diamond Rock.

At Roatan the LLUSD team worked Monday through Thursday and treated 129 patients, performed 203 restorations, 83 extractions, 65 cleanings, and 13 root canal procedures. Friday was a relaxation day at the seaside retreat, where tourism is the major source of employment. Using chairs made of PVC pipe and canvas (constructed in the LLU area), the team's temporary "office" was assembled on the beach-facing veranda of a delightful seaside structure. Dr. Morrow reported seeing "sooooo many Coca Cola signs everywhere. Because the water is hardly potable," he said, "soft drinks are a major thirst quencher that leads to high decay rates." Consequently, extractions outpaced endodontics. But the LLUSD team did save a lot of teeth, he noted, including the front teeth of a 20-year-old woman.

La Vida

James Padgett, DDS, assistant professor, Restorative Dentistry and Barry Krall, DDS, assistant professor, Dental Anesthesiology, led a dozen LLUSD dental students (a D1, four D2s, and seven D3s) on a 700-mile drive to La Vida Mission, a boarding school for 75 Navajo children at an elevation of 5,000 feet in the northwest New Mexico desert near Farmington. The spare landscape includes an Adventist church built some years ago by a Maranatha team.

At the end of a 14-hour drive in two vans and two cars, thirteen team members and all their dental supplies decamped into one house. With the exception of two legitimate units, lounge chairs elevated on milk crates served as dental chairs along with one modified weight bench. Most of the chairs had lights fashioned from microphone stands and flashlights.

This was not just an extraction trip, said Dr. Padgett; "the team performed amalgams, composites and cleanings for over 100 patients, a little bit of everything." One student celebrated getting to perform "a root canal that turned out amazing." Dr. Padgett's concluding comment on the needs of the population: "These people need so much work you could work on them all day."

Because the widely scattered Navajo population lacked transportation, team members went into the surrounding area in a van to screen patients and bring them back to La Vida.

MEND (Meeting Each Need with Dignity)

MEND provides a unique venue among the spring service learning trips. Evan Lemley, SD'07, assistant clinical professor, Dental Education Services, and Scott Smith, SD'09, assistant professor, Restorative Dentistry, were the supervising clinicians



Chioma Nkwocha, D1, and David Roquiz, D3, work in a makeshift operatory at La Vida Mission.

who oversaw the work of two dental hygiene and eight dentistry students (five D2s and three D3s).

Located in the San Fernando Valley just north of Los Angeles, Pacoima, California, MEND is a non-profit organization with a huge modern building that helps meet the fundamental needs of impoverished Angelenos. MEND provides food, job search assistance, and medical and dental services.

The students who participated at this service learning venue stayed at the Sheraton Hotel in Universal City and worked in a modern, well stocked dental care facility, with seven chairs, a sterilization area and an x-ray room. As in a private practice, the budding clinicians were provided assistants.

Second-year dental students were able to begin doing procedures they had performed only on typodonts—preps, injections and fillings on people. Because many of the patients spoke little or no English, some of the students got to practice or brush up on their Spanish language skills.

Several team members began to feel like real dentists and became acutely aware of the needs of so many people in the greater Los Angeles area.

Conclusion

The School of Dentistry's motto was proliferated throughout the 2011 spring break by what the volunteerism of 59 students and 22 faculty accomplished for disadvantaged people around the globe.

LLUSD Alumni Gear

The Alumni Association proudly offers the following items for sale. The reasonable prices for each of the items includes a small profit that will help fund Century Club activities such as sponsoring international service learning trips for students, personalized Bibles for incoming students, a white coat for each senior student, and the graduation reception.

These items make great graduation and birthday gifts for loved ones, or a way to treat yourself to a wonderful piece of Loma Linda University School of Dentistry.



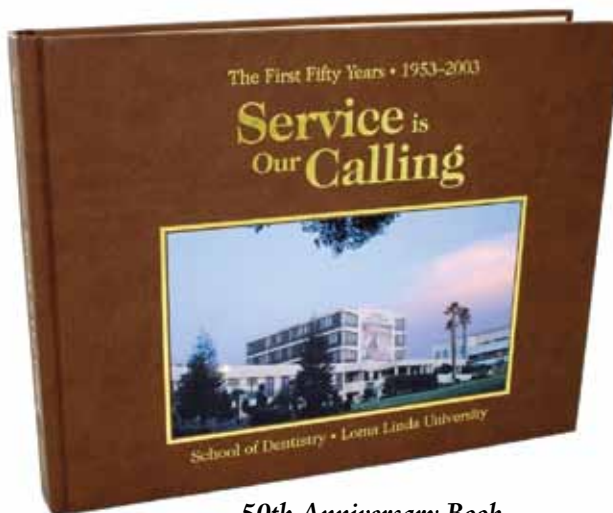
*Men's
LLUSD Citizen watch
\$149.99*



*Women's
LLUSD Citizen watch
\$149.99*



*Travel Mug
\$5.00*



*50th Anniversary Book
\$50.00
(with Dean's signature)
\$100.00*



*2GB Thumb Drive
\$15.00*



*Travel Wallet
\$20.00*



*Laptop Case
\$20.00*

To get LLUSD gear, go to:
www.dentistry.llu.edu
and click on



THE 52ND ALUMNI STUDENT CONVENTION

LLUSD students dedicated for service

As it does late on the Friday afternoon of each year's Alumni Student Convention, the Loma Linda University School of Dentistry held a dedication service for its Doctor of Dental Surgery, International Dentist Program, and Dental Hygiene students on February 11, 2011, in the Loma Linda University Church sanctuary.



Dr. Alan Woodson challenged the students to service.

The prayers of dedication, the very best in gospel music, the heartfelt homily—all characterized a ritual that makes obvious the unabashedly faith-based and service-oriented nature of oral health care education at LLUSD.

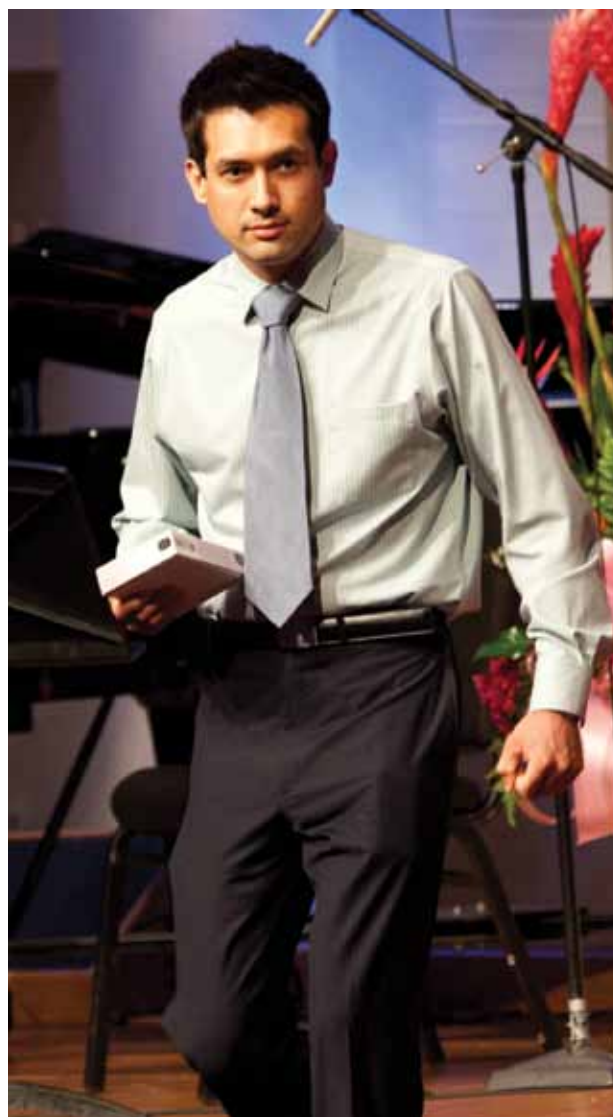
Dignifying the event were academically robed leaders of the University and the School. In welcoming all present, LLU Provost Ronald L. Carter, PhD, expressed the university's pride in the School of Dentistry and his appreciation for the dedication of its students and the families and friends who encourage and support them.

In response to the opening prayer by School of Dentistry Dean Charles Goodacre, SD'71, the nationally celebrated Mt. Rubidoux SDA church choir performed "Your Love Divine" in musical praise, and sang "Total Praise."

Alan Woodson, SD'87, director of the Mt. Rubidoux Choir, then moved to the podium to deliver the dedication

address entitled, "Extreme Makover." Dr. Woodson's homily focused on how the effort by his Upland, California, private practice to help a local homeless man not only restored his oral health but restored his life and proved such a blessing to the dentist and his staff.

Following Dr. Woodson's address, the School of Dentistry and its alumni association presented the first year Dentistry, International Dentist Program, and Dental Hygiene students with leather Bibles embossed with the School's insignia and their names, while the members of each senior (2011) class were assisted in donning white coats embroidered with the School of Dentistry insignia and their names.



First-year dental student Charles Toews with his Bible.



Dental student Thomas Szutz, class of 2011, receives the Christ-like Service Award from Fred Kasischke, DMin, associate dean, Admissions and Service Learning.



Graham Stacey, PhD, associate dean, Student Affairs, reads the names as Dean Goodacre hands a Bible to first year dental hygiene student Chantal Cohanzad.



Gregory Mitchell, DDS, director, International Dentist Program, helps class of 2011 dental student Christy Pogue with her coat.



Roquiz siblings David (dentistry class of 2012), Deborah (School of Medicine freshman), and Andrew (School of Medicine senior) play "Dies Irie."



Ronald Dailey, PhD, executive associate dean, visits with Julie Bakland-Sugita, SD'91, at the Alumni Student Convention banquet.



A convention exhibitor demonstrates his product.



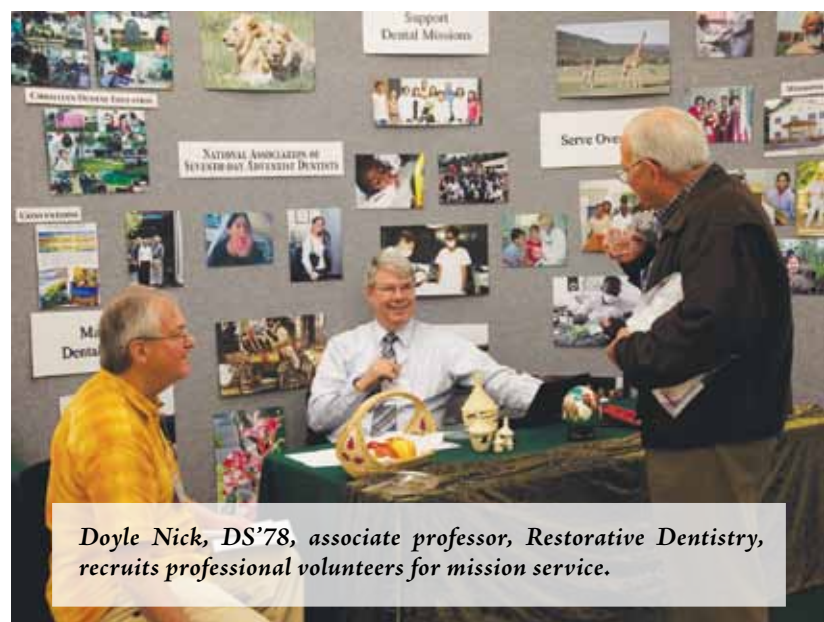
John Munce, SD'78, and Fred Berry, DDS, explore their options.



From left: Sukheet Kaur, IDP'11; Zulema Cabrera, IDP'11; Mrs. Hala AL-Hassan; Priscila Jelsing, IDP'11; Maria Le, IDP'11



Bill Seibly, SD'59, Ruben Santana, IDP'02, and Lana Gardai, IDP'00

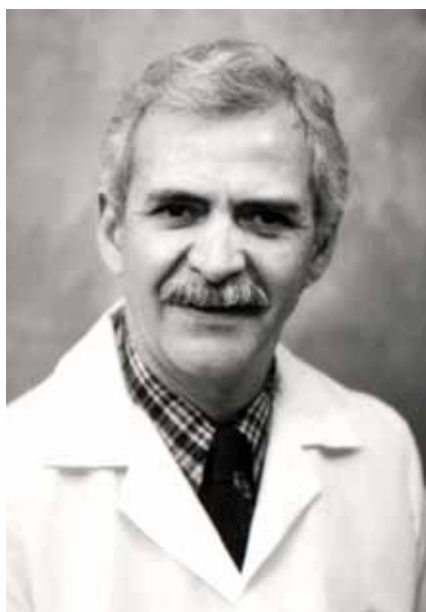


Doyle Nick, DS'78, associate professor, Restorative Dentistry, recruits professional volunteers for mission service.

Alumni Student Convention banquet highlights

The International Dentist Program achieved its 25th anniversary this year—a milestone that was celebrated at the Homecoming Banquet February 10, during the School of Dentistry's 51st Alumni Student Convention.

A large contingent of IDP alumni and guests swelled the crowd of celebrants at the San Bernardino Hilton's banquet hall where they were treated to a multimedia history of the program Dean Charles Goodacre said was due to "the vision and perseverance of two men: Dr. Lloyd Baum, and his administrative collaborator, Dr. Thor Bakland," executive associate dean at the time.



IDP pioneers—Dr. Lloyd Baum and Dr. Thor Bakland

Dr. Bakland was present to enjoy the memories and the honor, while several of Dr. Baum's family members were able to appreciate the many digitally captured interview testimonials to Dr. Baum by fellow faculty and students such as

Robert Darby, SD'61, Art Morgan, SD'60, Thomas Thompson, SD'60, Nels Rasmussen Jr., SD'61, Carlton Lofgren, SD'61, and Eby Johnson, IDP'88.

A review of the IDP began with a reminder that in the early 1980s, then LLUSD Dean Judson Klooster, DDS, along with Lloyd Baum, DDS, and Thor Bakland, SD'62, recognized the need to offer foreign-trained dentists an oppor-



From left: Rosario Correa, IDP'12; Hayffa Jamal, IDP'12; Sorina Ratchford, IDP'12; Igor Babenkov, IDP'12; Michael Fitzpatrick, SD'87; Deeb Alrihani, IDP'12; Sofia Rodriguez Fitzpatrick, DDS; Irmgart Mitchell; Daniele Green, IDP'12; Chantal Bikoi, IDP'12; Gregory Mitchell, SD'84; Michael Chan, IDP'12; Sarah Elrabaa, IDP'12; Ali-Reza Etemadieh, IDP'12; Pirouz Shabbazian, IDP'12; Marta Rudat, IDP'12; Jose Wu, IDP'12

tunity to update their clinical skills and earn DDS degrees.

Started in 1985, the School's IDP program became the second in the State of California. Dr. Baum and William Seibly, SD'59, PhD'81, comprised the program's initial faculty. In the ensuing years, the program grew under the leadership of four subsequent directors:

Bruce Pence, SD'65; Daniel Hall, DDS, PG'95; Michael Fitzpatrick, SD'87; and Gregory Mitchell, SD'84. Beginning in 1985 with three students, the program now boasts 25 students per class.



Dr. Bakland enjoys the festivities.



Brad Baum, MD, stood in for his ailing father.

Since its 1986 inception, the International Dentist Program has produced 374 dentists from 78 countries with US licenses. "These men and women have represented their alma mater well," said Dean Goodacre.

Many photos from the event portray what a positively meaningful occasion this reunion and reminiscence was to its alumni, family, and friends.

Carlton Lofgren: Distinguished Alumnus 2011

Carlton Lofgren, SD'61, is this year's recipient of the Loma Linda University School of Dentistry Alumni Association Distinguished Service Award. The honor was presented to him by Dean Charles Goodacre, SD'71, during the Alumni Student Convention banquet held at the San Bernardino Hilton.

A charter member of the Dean's Circle, Dr. Carlton Lofgren's "unique background, willing spirit, and extraordinary contributions to the University made him the perfect candidate for this award," Dean Goodacre said.

While a senior at LLUSD, Dr. Lofgren was honored to receive both the Restorative Dentistry Award for his clinical skills and the President's Award for his leadership abilities.

Dr. Lofgren practiced privately for ten years following graduation, while simultaneously serving on the School of Dentistry faculty. He also was active in teaching gold



Dr. and Mrs Lofgren were honored at his receiving the 2011 Loma Linda University School of Dentistry Alumni Association Distinguished Service Award.

foil technique, and a member of the Gold Foil Club.

A committed churchman, Dr. Lofgren was for years an elder for the Arlington Seventh-day Adventist Church, before transferring his membership to the Loma Linda University Church, where he currently serves on several church committees, including the Fundraising Committee for the University Church Chapel.

In 1971, Dr. Lofgren joined his family's egg business as operations vice president, subsequently moving up to executive vice president, before being named president in 1991. He served on the American Egg Board for 12 years, and was appointed president of that entity for the period 1999 to 2001, when he received the Producer of the Year National Award.

Dr. Lofgren contributes to his community as well, serving on the Mission Savings Bank Board from 1988 to 2004.

In 1991, he was invited to join the Loma Linda University Councilors for which he served as president from 1999 to 2000. He was appointed to the Loma Linda University Board of Trustees in 2001, and has been invited to remain on that board through 2012.

Dr. Lofgren and his wife, Raye, shouldered the demanding role as Centennial Complex Steering Committee co-chairs, in the effort to fund the Centennial Building that opened in 2009. This magnificent, 151,000 square foot structure was made possible by more than \$50,000,000 in donations, raised through the campaign managed by Carlton and Raye Lofgren and Carleton and Patti (Shryock) Wallace.

Taking into account all of the foregoing, Dr. Lofgren considers his most important accomplishment to be his three children and nine grandchildren. His children have presented him with the very prestigious Best-Daddy-in-the-Whole-

World award, and Father-of-the-Year honors. These are the distinctions he most cherishes.

School of Dentistry recognizes retiring faculty

During its recent (February 10) Alumni Student Convention banquet, the LLU School of Dentistry paid tribute to five faculty members who are either retiring or significantly reducing their involvement with the School.



Dr. Fred Berry

Fred Berry, DDS, professor, Department of Restorative Dentistry, operated a private practice for 23 years before becoming a dental educator. The span of his contribution to dentistry as a teaching professional now matches his 23 years in private practice. In 2006, Dr. Berry received both

the Pierre Fauchard Academy Teacher of the Year and the Loma Linda University School of Dentistry Teacher of the Year award. He is a regular continuing education presenter at the annual Alumni Student Convention, and he continually receives excellent reviews for his lectures from both students and alumni. Dr. Berry has driven nearly 600,000 miles during his daily commutes from Dana Point to Loma Linda University over the past 23 years. "On behalf of the entire School of Dentistry family," Dean Charles Goodacre thanked Dr. Berry for his "exceptional commitment to the School of Dentistry."

Dan Hall, DDS, PG'95, associate professor, Department of Restorative Dentistry, is particularly appreciated by alumni of the International Dentist Program for his contributions to their professional training. Dr. Hall has been a faculty member at the School since 1968—a total of 43 years of service. His responsibilities



Dr. Dan Hall

have included section chief for removable prosthodontics, director of the Faculty Dental Office, and director of the International Dentist Program. Dr. Hall has been a significant mentor for student research projects, and in 2007 he received the School of Dentistry Distinguished Service Award in appreciation for his contributions to both the dental profession and dental education. "Dan's genuine caring manner and commitment to enhancing the education of our students," Dr. Goodacre noted, "has been quite extraordinary."

Hilbert Lentz, SD'57, MS'70, assistant professor, Department of Oral Diagnosis, Radiology, and Pathology, a member of the School's first dental class, has served his alma mater for thirty-one years. The School of Dentistry clinics and students

have benefited from Dr. Lentz's screening expertise, as he examined and diagnosed thousands of new patients who have entered the School's clinic during his three decades on faculty. Dean Goodacre thanked Dr. Lentz "for your steadfast services to our patients, faculty, and students, your long-term contributions to the School, and your dedicated support of the School's motto: Service is Our Calling."

George Lessard, PhD, emeritus professor, Dental Education Services, has been the resident biochemistry basic scientist at the School of Dentistry for the past 24 years. In addition to teaching biochemistry, his responsibilities have included being director of research planning, coordinator for the basic sciences through several accreditation cycles, and course director for etiology and management of dental caries. Dental and dental hygiene students alike have benefited from his knowledge of the basic sciences as they are applied to dentistry. In thanking Dr. Lessard "for his services



Dr. Hilbert Lentz



Dr. George Lessard

to the basic science and research activities of the School," Dean Goodacre enumerated "his contributions to numerous University and School committees, including the Admissions Committee, that have created a lasting effect on the School and its alumni."

Craig Ririe, DDS. "I don't have words to describe him," says Nikola Angelov, DDS, MS, PhD, of Craig Ririe, MS'78, who has served as interim chair of the Department of Periodontics since July 2003. Dr. Anglelov adds, "He's been like a father to me—great people skills, great listener, always going the extra step for everybody."



Dr. Craig Ririe

Dr. Ririe, retired after spring quarter 2011 to his Pleasant Grove, Utah, apple farm and, incidentally, to his periodontal practice in Pleasant Grove. For eight years he has maintained that practice with Friday office hours after 50-plus-hour weeks spent at LLUSD. He explained the long hours (6 or 6:15 a.m. to 7 or 7:30

p.m., Monday through Thursday), as the thing to do when he was in Loma Linda without family.

Born and raised in San Bernardino, Dr. Ririe may be the only faculty member who graduated from San Bernardino High School. After predentistry at University of California Riverside and a two-year Mormon mission trip in Argentina, Dr. Ririe completed his dental education at Creighton University, Omaha, Nebraska. A two-year stint in the U.S. Air Force in San Antonio, Texas, preceded the practice he opened in Flagstaff, Arizona, in 1974.

Four years later, Dr. Ririe entered the periodontal program at Loma Linda University, and completed a thesis on wound healing that became a runner-up finalist for the American Academy of Periodontology's most prestigious Balint Orban Memorial prize. A one-year research fellowship in Norway focused on a new procedure: wound healing studies using the transmission electron microscope to study regenerative surgery.

Returning to Flagstaff, Dr. Ririe practiced there for 29 years before turning to another of his passions, becoming a part-time farmer. Because you can't farm "in cinders from volcanos," he built a home in the middle of a Pleasant Grove, Utah, apple orchard with a view of Lake Utah and the mountains. "I do the orchard on auto pilot," he comments. Indeed, he is its sole caretaker.

Responding to an invitation by Steve Garrett, MS'76, a colleague from graduate days who with Dr. Robert Kiger,

SD'70, was chairing LLUSD's periodontics department, Dr. Ririe began weekly commutes to LLUSD to lecture to students. "I loved it," he says. "I was hooked." Notably devoted to teaching students the correct ways of periodontic treatment, he also gave attention to teaching the practice management side of dentistry. And LLUSD soon invited Dr. Ririe to oversee the program when Drs. Garrett and Kiger left.

Dramatic changes occurred during Dr. Ririe's administration. He recruited a stellar roster of associates to supplement the former two-person faculty. Jeffrey Henkin, DDS, MS, who became director of the periodontics graduate program, says that faculty members found Dr. Ririe to be extremely dedicated and supportive. Concerned that faculty were duplicating each others' lectures, he took the curriculum apart systematically; the reorganized curriculum is now preserved on CDs complete with PowerPoint handouts. "It took about four years," he says. Now the department has a library containing every lecture that has been given.

Dr. Ririe established a reputation for being a devoted teacher himself, emphasizing the correct ways of doing treatment as well as teaching the practice management side of dentistry. In a focused effort to elicit student input, he initiated periodic meetings with representatives of each predoctoral class. These sessions contributed to changes in clinic procedures and no doubt account for an increase in LLUSD graduates who remain on campus to complete periodontal graduate studies.

Addressing students' needs in the periodontal clinic, Dr. Ririe divided the clinic into sections with a periodontist at each station. "This is faculty intensive, but it serves the students," says Dr. Ririe. The new procedure upped efficiency. Instead of seeing 16 to 20 students, the clinic began processing an average of 70 students in a four-hour session.

After eight years of commuting (someone estimated his airline fares exceeded \$160,000), Dr. Ririe says, "I haven't regretted it at all. But my wife would like to see more of me." He returns to the farm (horses, sheep, pygmy goats, dogs, and beef cattle) that his wife has overseen during his sojourns to Loma Linda, and will no doubt acquire a bit more of the periodontics practice in Pleasant Grove. He leaves behind a department enhanced by his leadership.

Lane Thomsen, SD'65, MS'74, professor, Department of Oral Diagnosis, Radiology, and Pathology, is just concluding his second ten-year tenure as chair of Oral Diagnosis, Radiology, and Pathology. He has consistently received some of the highest course evaluations from dental and dental hygiene students, including comments such as, "Dr. Thomsen is very good at his job; he makes this class great." "He is an absolutely wonderful teacher." And "I love Dr. Thomsen's sense of humor." He received the School of Dentistry Distinguished Service Award in 2005 for his outstanding contributions to its education and service commitments. In thanking Dr. Thomsen "for your leadership and service to the

School," Dean Goodacre added, "He is a national continuing education speaker, and a favorite Alumni Student Convention presenter for both hygienists and dentists."

Spring quarter, 2011, in his Oral Diagnosis, Radiology, and Pathology office, Lane Thomsen, SD'65, MS'74, sat surrounded by books and artifacts (one significantly labeled "Quack Doctor"). Commenting on his career upon completion of his second ten-year tenure as department chair, he said, "There was never any question," he said, commenting on

his career. "From high school on, I was going to study dentistry." On the other hand, he added, "teaching never entered my mind."

Nevertheless, four years after graduation, with patients scheduled ahead six months in his Rio Dell, California, practice, he unwittingly planted a seed that would alter his career. Chatting with Dean Charles Smith during a slow day of fishing



Dr. Lane Thomsen

with other alumni in Humboldt County, Dr. Thomsen said, "I really liked oral pathology while in dental school."

Soon Dr. Thomsen was in Loma Linda, becoming the last resident at LLUSD to complete a master's in oral pathology. In return for his residency training, his contract specified that he would teach at the School for five years.

"I didn't leave after five years," he says. "I enjoyed it. I don't think I could have had a better profession: getting to teach, getting to travel, getting to practice one day a week." In 2010, his traveling took him to North Korea where, for two weeks in an unusual liaison with the North Korean government, he taught at the medical/dental hospital in Pyongyang.

A colleague guesses that Dr. Thomsen "has single-handedly conducted more continuing education courses" than any other faculty at LLUSD. He expected to be nervous at a recent 2011 California Dental Association meeting, where he lectured twice to audiences of more than 350 people. "But," he reflected later, "I kept them laughing." The speaker's challenge, he noted, was to keep an audience interested so they wouldn't get bored. "You need to get to the audience in the first three or four minutes."

A former colleague, Elmer Kelln, DDS, says, "He really knew how to hold students' attention in the classroom." But the students knew that what he was teaching would be important for them to know when they would be "out there."

Named LLUSD Teacher of the Year in 2011, Dr. Thomsen's impact on students has been widespread. He has been the lecturer and/or coordinator of more than twenty courses offered in the predoctoral curriculum, teaching more classroom hours than has any other faculty.

Students and colleagues knew that when Dr. Thomsen walked into a classroom or faculty meeting, he was likely to spawn some mischief while getting the agenda underway with wit and dispatch. The appreciation of colleagues is evident in his being selected to chair the LLUSD Faculty Council, from 2000 to 2002 and again between 2004 and 2010.

His diverse commitments included creation of online internet courses for dental hygiene National Board Review and leadership in the Coalition for a Tobacco-Free San Bernardino County, for which he received an award from the county's Department of Public Health in 1998.

In March 2011, Dr. Thomsen ended his second decade-long term as chair of the Department of Oral Diagnosis, Radiology, and Pathology Department, commenting, "Administration isn't as fun as teaching. It's nice not to be a department chairman. The department needs a change." Dr. Thomsen will continue his two-days-a-week practice locally and will continue to lecture "on and off" in ODRP, commuting from Humboldt County, where he was born, anticipating more time with his aging mother and with his favorite pastime, fishing.

School of Dentistry anniversary classes contribute

The generous support that the School of Dentistry alumni regularly provides its alma mater was made evident once again during the recent (February 10-13) Alumni Student Convention.

Homecoming members of the class of 1961 were honored at this year's Alumni Student banquet. Dean Charles Goodacre, SD'71, MSD, cited some of the "incredible contributions the 52 members of the class of 1961 have made to the School of Dentistry, to the profession, to their communities, and to their churches. Seventeen of the 1961 graduates have given nearly 200 years of faculty service to the School of Dentistry—including an associate dean, department chair, two presidents of the Alumni Association, five Century Club presidents, and two members of the Loma Linda University Board of Trustees."

Dr. Goodacre noted that the class of 1961 caught the vision 50 years ago "that learning can be enhanced by actually seeing and visualizing clinical procedures" and funded the School's first portable closed circuit television system so many decades ago.

"Your class helped lay the foundation for the future of dental education," Dr. Goodacre continued, "and that tradition has been continued today with the development of sophisticated computer programs that substantially enhance the learning of our students."



The 50th anniversary class of 1961 (front L-R): Mel Johnson, Richard Smith (middle row L-R): Bernard Mallory, Leon Grabow, Robert Darby, Melvin Lund (class sponsor), DDS, Warren Waggeber, Lew Mowery, Arthur Spenst (back L-R): Arthur Garner, Lloyd Johnson, Kenneth Suelzle, Nels Rasmussen, Jr, Erland Hendrickson, Gene Wilson, Carlton Lofgren, Duane Hedrick

Bob Darby, SD'61, spearheaded the effort by his class to raise money for the School. As a result, on behalf of the class of 1961, Dr. Darby was able to present Dean Goodacre with a check for \$415,676.46. The majority of that check was accounted for by gifts from two members of the class: more than \$280,000 from the late Hugh Love, SD'61, and his wife, Dollie, who had established a charitable remainder trust that was fulfilled when Mrs. Love died in 2010, and a gift of property valued at \$100,000 from Erland Hendrickson, SD'61.

Dean Goodacre elicited a chuckle when he touted "the great class of 1971," for "the incredible generosity of my classmates who have made a real difference in the learning of our students." A decade ago, the class of 1971 funded the refurbishing of both first-floor amphitheaters—tables that stretched the length of the entire row of seats, electric plugs and data ports for every seat, and state-of-the-art audiovisual equipment. Ten years later, the audiovisual equipment was no longer state of the art and some of it even obsolete. The class of 1971 raised funds to update its amphitheaters with equipment that will open up new options for learning.

The generous donations from the class of 1971 have enabled the upgrade from analog to digital systems in the amphitheaters; students and faculty alike now experience

the benefits (and occasional challenges) of these systems.

The move from analog to digital systems provides clearer sound and sharper images. The state-of-the-art components enable the faculty to manage the audiovisual equipment from a console that operates the lights, the sound, and images.

Substantial gifts from the anniversary classes totaling \$645,244.85 were presented to Dean Goodacre in the form of oversized checks.

Class of 1961	\$ 415,676.46
Class of 1971	\$ 160,000.00
Class of 1981	\$ 13,180.00
Class of 1986	\$ 19,495.00
Class of 1991	\$ 5,750.00
Class of 2001	\$ 12,390.00
Class of 2006	\$ 18,753.39

Department of Dental Hygiene honors alumna and student

LLU School of Dentistry Alumni Association dental hygiene co-presidents (and mother-daughter classmates) Patti Lyon, DH'05, and Kelli Lyon Alexander, DH'05, hosted the annual Dental Hygiene and Assistant luncheon at San Bernardino's Arrowhead Country Club during the School's February 2011 Alumni Student Convention.



Janeen Duff presents Angela Wakefield with the 2011 Student of the Year Award plaque.

Besides celebrating the eleven honored alumni classes (beginning with the class of 1961), the homecoming luncheon was the occasion for the presentation of two Department of Dental Hygiene annual awards: the Student of the Year Award and the Alumna of the Year Award.

Janeen Duff, DH'81, assistant professor, Dental Hygiene Department, presented dental hygiene senior Angela Wakefield with the 2011 Student of the Year Award.

Determined by the dental hygiene faculty each year, the award acknowledges the recipient for both academic and clinical achievement. Ms. Wakefield "is in the top of her class academically and is patient, sociable and giving with classmates," said Ms. Duff. "She has a great sense of humor, and some would call her a bit of an actress, as evidenced in role playing exercises in class! She applies what she has learned academically and synthesizes it into the clinical environment with confidence."

One faculty member said, "I would allow her to clean my teeth now before graduation!" Another faculty member said, "She's good with patients, is refreshing, respectful, and always teachable in wanting to learn new things during clinic."

Ms. Wakefield was the first in her class to finish her eligibility requirements, and it was the judgment of her

mentors that "she is a stickler for an attention to detail and thoroughness with clinical procedures."

Ms. Duff speculated that Ms. Wakefield's degree in business management "enabled her to hone her exceptional interpersonal skills with patient education, as she counsels patients like a seasoned veteran."

Ms. Wakefield has continued to work part time, while staying on the Dean's List during her study of dental hygiene.

Department of Dental Hygiene chair Kristi Wilkins, DH'80, MA, presented Darlene Cheek, DH'71, with the 2011 Alumna of the Year Award "to an outstanding dental hygienist and alumna who has served her community, our profession and hundreds of students so well during her 40-year tenure."

Ms. Wilkins reviewed Ms. Cheek's clinical career that began in the San Francisco Bay area in the early 1970s, before a call to Johannesburg, South Africa, in the mid '70s provided her an opportunity to extend the School's influence to a dental teaching hospital where she was offered the position of director. "I personally crossed paths with our Alumna of the Year while she was an assistant professor of dental hygiene in the late '70s and early '80s," Ms. Wilkins recalled.

In 1978 Ms. Cheek earned a Master of Public Health degree with an emphasis in health education from Loma Linda University's School of Public Health. She was elected into the Delta Omega Honorary Public Health Society where she served as secretary/treasurer. She also served as faculty advisor for the LLU Student American Dental Hygiene Association (SADHA), and was a contributor to the State of California's 1980 Curriculum Guide on Dental



Kristi Wilkins presents the Alumna of the Year Award to Darlene Cheek.

Disease Prevention for pre-school—to sixth grade teachers.

While raising her family, Ms. Cheek practiced full time throughout Redlands, Rialto, Yucaipa, and Rubidoux, serving her patients and dentist employers with the Loma Linda University dental hygiene brand—Christ's compassion and whole person care with a soft touch.

An inveterate contributor to her church and its institutions, Ms. Cheek volunteers with academy home and school associations, as a Sabbath School teacher, and in the LLU Church chamber and sanctuary orchestras. She is a 40-year member of the American Dental Hygiene Association, recently served for two years as president of the Tri-County Dental Hygienists' Society, and most recently as trustee to the California Dental Hygiene Association and the American Dental Hygiene Association.

After months of personal reflection in 2005, Ms. Cheek returned to full-time teaching at the School of Dentistry, where she oversees the community health curriculum, dental health education, advanced clinical techniques at numerous off site



Gregory Davis, SM'82, sits with his daughter and some of her dental hygiene (2011) classmates (from left): Caroline Schneider, Jessica Kubrock, Dr. Davis, Danae Davis, Noelle Snyder, Jordyn Gascay.

clinical rotations, and spends hundreds of hours a year planning student involvement in health fairs, dental screenings, and volunteer clinics. Currently she chairs the School of Dentistry's treatment of tobacco dependant patients committee.

Ms. Cheek is actively involved with the Society for Research on Nicotine and Tobacco, including co-presenting research in 2009 at the Society's annual

session in Dublin, Ireland.

Ms. Wilkins affirmed the words of the students who voted Ms. Cheek 2008 Teacher of the Year: "During hard times on clinic and in class she gave us contagious hope and motivated us to persevere . . . with her comforting touch in times of stress—her delighted touch in times of celebration—her caring touch all the times in between."

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Upcoming 2011 Continuing Education

September 11

Infection Control & California Dental Practice Act

Presenters:

Nancy Andrews, BS, RDH

Instructor, Department of Dental Hygiene
West Coast University, Anaheim & Tustin, CA

Bette Robin, DDS, JD

Attorney in Private Practice, Tustin, CA

September 18

Emerging Trends in Periodontics

Presenter:

Jim Grisdale, -DDS

Board Certified Specialist in Periodontics and Prosthodontics
Private Practice, Vancouver, British Columbia

October 2 & 3

Total Sinus Graft Solutions: From Anatomy to Mastering Sinus Graft Procedures

Presenters:

Christopher A. Church, MD

Assistant Professor of Surgery
Loma Linda University, School of Medicine

Jaime Lozada, DDS

Professor and Director
Advanced Education Program in Implant Dentistry
Loma Linda University, School of Dentistry

Alan Herford, DDS, MD

Philip J. Boyne and Peter Geistlich, Professors
Oral and Maxillofacial Surgery
Loma Linda University, School of Dentistry

Stephen Wallace, DDS, Associate Professor

Periodontology and Implant Dentistry
New York University College of Dentistry

Nicholas Caplanis, DMD, MS, Assistant Professor

Advanced Education Program in Implant Dentistry
Loma Linda University, School of Dentistry

Joseph Y. Kan, DDS, MS

Professor, Department of Restorative Dentistry
Coordinator, Predoctoral Program in Implant Dentistry
Loma Linda University, School of Dentistry

Aladdin Al-Ardah, DDS, MS, Assistant Professor

Advanced Education Program in Implant Dentistry
Coordinator, Internship/Externship Program in Implant
Dentistry
Loma Linda University, School of Dentistry

October 30

How to Thrive in the New Economy: Predictable & Profitable Procedures to Improve Your Practice

Presenter:

Marvin A. Fier, DDS

Executive Vice President, American Society for Dental Aesthetics
Pomona, New York

November 13

The Judson Klooster Symposium: Clinical Updates for the Oral Health Provider (Part of net proceeds go to Klooster Scholarship Fund)

Presenters:

Robert Handysides, DDS

Associate Professor and Chair, Department of Endodontics
Loma Linda University, School of Dentistry

Heidi Christensen, DDS, MS

Associate Professor, Oral Diagnosis, Radiology and Pathology
Loma Linda University, School of Dentistry

Jung-Wei Chen, DDS, MS, PhD

Associate Professor and Director
Advanced Education Program in Pediatric Dentistry
Loma Linda University, School of Dentistry

Mark Estey, DDS

Associate Professor, Restorative Dentistry
Loma Linda University, School of Dentistry

December 4

Street Drugs and Their Impact on You, Your Family, and Your Dental Practice!

Presenter:

Harold L. Crossley, DDS, PhD

Professor Emeritus,
University of Maryland Dental School

2012

January 15 and 16

Root Canal Instrumentation

Presenters:

Robert Handysides, DDS

Associate Professor and Chair, Endodontics
Loma Linda University, School of Dentistry

Mahmoud Torabinejad, DMD, MSD, PhD

Professor, Department of Endodontics
Director, Advanced Education Program in Endodontics
Loma Linda University, School of Dentistry

January 22

Clinical Complications with Conventional & Implant Prostheses: How to Minimize and Manage Them When They Do Occur

Presenter:

Charles J. Goodacre, DDS, MSD

Dean, School of Dentistry
Professor, Department of Restorative Dentistry
Loma Linda University

Registration information

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Loma Linda University School of Dentistry
Continuing Dental Education office at
(909) 558-4685

Student research success

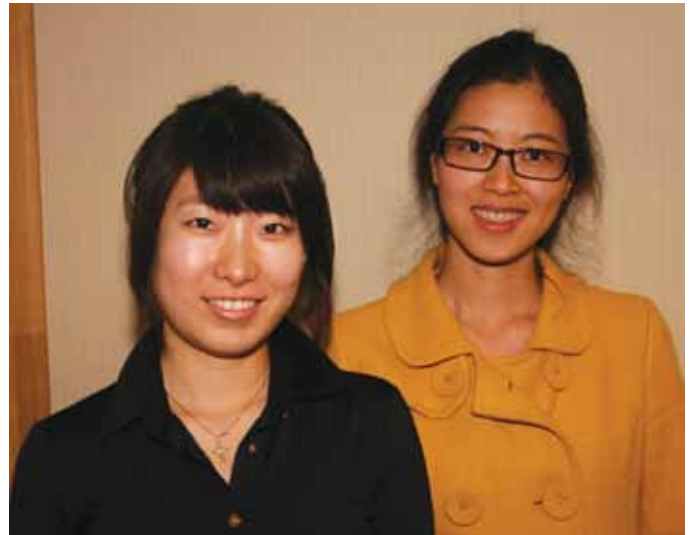
Three amphitheatres in Loma Linda University's Centennial Center were the site of 45 School of Dentistry student research presentations Friday afternoon March 4. The authors of the studies were third-year dental and senior dental hygiene students. Their audiences were overflow crowds of peers and faculty.

Almost exclusively in teams of three, the students presented digital slide shows that provided an overview of their projects in one of three categories: clinical, educational, laboratory.

In each of the amphitheatres a moderator facilitated the process and three School faculty members served as judges who asked probing questions at the conclusion of each presentation.

When the three-and-a-half hours of presentations concluded, the judges caucused to assess the relative merits of the presentations and arrived at first, second, and third place winners in each category. This year's winners are pictured within categories below.

LLUSD's 15 winning teams went on to compete at the California Dental Association Convention (May 14) in Anaheim, California, where they won first place in all four available table clinic categories as well as an additional four second and third place awards.



Dentistry, Clinical, second place
Soon Rye Kwon and Yeboon Ahn

Gender Differences of Multiple Canals in Mandibular Incisors Using CBCT

MENTOR: Dr. David Jaramillo

CDA Clinical Category, 2nd place



Dentistry, Clinical, first place

Michael Flewelling, Vanessa Browne, and Mark Wierenga

Sterilization of Used and Contaminated Implant Healing Abutments & Impression Copings: A Cost Benefit Analysis.

MENTORS: Drs. Neal Johnson, Paul Richardson, and Nikola Angelov; Mr. Raydolfo Apreccio; and Ms. Alisa Wilson

CDA Clinical Category, 1st place



Dentistry, Clinical, third place

Andrew Elmasri, Thy Nguyen, and Sarah Hopps

The Effects of Arginine Prophy Paste on Tooth Sensitivity Following Tooth Whitening

MENTOR: Dr. Sean Lee

Student research success (continued)



Dental Hygiene, Clinical, first place
Trisha Aprecio, Danae Davis, and Chris Chu

Case Study of a Patient with Post-Polio Syndrome
 MENTORS: Dr. Adrian Mobilia and Ms. Darlene Armstrong



Dentistry, Laboratory, second place
James Mashni, Quinn Montgomery, and Artin Meserkhani

Comparing Marginal Accuracy of Metal Copings and All Ceramic IPS e.max Copings
 MENTOR: Dr. Nadim Baba

CDA Scientific Category, 3rd place



Dentistry, Laboratory, first place
Michelle Shin, Dongjin Sab, and Jung Yoon Chang

A Comparison Study: The Sealing Properties of Mineral Trioxide Aggregate and Root Repair Material
 MENTOR: Dr. David Jaramillo



Dentistry, Laboratory, third place
Allen Reeder, John Chae, and Alex Matosian

Evaluation of Caries Risk Diagnostic Tools
 MENTOR: Dr. Brian Novy and Mr. Raydolfo Aprecio

CDA Scientific Category, 1st place

Student research success (continued)



Dental Hygiene, Laboratory, first place
Dulce Zauala, Erika Nelson, and Angela Wakefield

Measuring the Concentration Effect of Xylitol
MENTOR: Mr. Raydolfo Aprecio

CDA 1st place (RDH)



Dental Hygiene, Laboratory, third place
Caroline Schneider, Rebecca-Ann Roquiz, and Julianne Asbury

The Antimicrobial Effects of a Novel Cranberry Extract Dentifrice
MENTORS: Dr. Brian Novy and Mr. Raydolfo Aprecio



Dental Hygiene, Laboratory, second place
Suzanne Finch, Ashley Egetter, and Cynthia Gutierrez

Antimicrobial Potential of Fluoride, Arginine and Triclosan on Three Oral Microorganisms
MENTORS: Dr. Wu Zhang and Mr. Raydolfo Aprecio



Dentistry, Educational, first place
David Westerhaus, Josh Renk, and Nyeland Newel

Learning axiUm: Facilitating the Transition From Classroom to Clinic
MENTORS: Dr. Heidi Christensen

CDA 3rd place (Community)

Student research success (concluded)



Dental, Educational, second place
Chad Nosek, Andrew Taylor, and Geoff Robinson

Ergonomics and the Administration of Local Anesthesia in Dentistry
MENTOR: Dr. Barry Krall

CDA 1st place (Community)



Dental Hygiene, Educational, first place
Rachel Morris, Shirin Agha Mirkarimi, and Jinu Pak

Oral Health Instructions for Implant Patients
MENTORS: Dr. Jaime Losada and Ms. Kristi Wilkins



Dentistry, Educational, third place
Brian Kang, Kiddee Poomprakobsri, and Dave Srikureja

Educational Materials on PNAM Appliance for Parents of Children With Orofacial Cleft
MENTORS: Drs. Wesley Okumura and Jung-Wei Chen

CDA 2nd place (Community)



Dental Hygiene, Educational, second place
Heather Dunn, Yasaman Aryaee, and Jessica Szutz

Oral Care Instructions for the Care Provider of a Patient With Alzheimer's
MENTOR: Dr. Ann Steiner

Alumni Student Convention Continuing Education, 2012

February 9

TMD Symposium: *Is My Headache Due To My Husband or TMD?*

Presenters:

Joseph Caruso, DDS, MS, MPH

Associate Dean, Strategic Initiatives & Faculty Practices
Chair and Professor, Orthodontics
Loma Linda University, School of Dentistry

Charles McNeill, DDS

Director, Center for Orofacial Pain
University of California, School of Dentistry
San Francisco, California

Ali Makki, DMD

Associate Professor, Oral Diagnosis, Radiology and Pathology
Loma Linda University, School of Dentistry

G. William Arnett, DDS

Private Practice, Specializing in Orthognathic Surgery & Research
Santa Barbara, California

February 10

Issues with Tissues: A Review of Oral Pathology

Presenters:

Susan Richards, DDS

Associate Professor, Oral Diagnosis, Radiology and Pathology
Loma Linda University, School of Dentistry

Lane Thomsen, DDS, MS

Professor, Oral Diagnosis, Radiology and Pathology
Loma Linda University, School of Dentistry

February 12

32nd Annual Dental Anesthesiology Symposium

Presenters:

Danial A. Haas, DDS, PhD

Professor and Associate Dean; Head, Discipline of Dental Anaesthesia; Director, Graduate Program in Dental Anaesthesia
University of Toronto Faculty of Dentistry

Barry Krall, DDS

Director, Predoctoral Program in Dental Anesthesia
Assistant Professor, Dental Anesthesiology
Loma Linda University, School of Dentistry

John Leyman, DDS

Director, Koppel Special Care Dentistry Center
Associate Professor, Dental Anesthesiology
Loma Linda University, School of Dentistry

Larry Trapp, DDS

Director, Post Graduate Program in Dental Anesthesia
Associate Professor, Dental Anesthesiology
Loma Linda University, School of Dentistry

February 12

Essence of Anterior Esthetics: From Veneers to Implants

Presenters:

Joseph Y. Kan, DDS, MS

Professor, Department of Restorative Dentistry
Coordinator, Predoctoral Program in Implant Dentistry
Loma Linda University, School of Dentistry

Stephen J. Chu, DMD, MSD

Clinical Associate Professor, Periodontology & Implant Dentistry
New York University College of Dentistry

Homayoun H. Zadeh, DDS, PhD

Associate Professor
Periodontics, Diagnostic Sciences & Dental Hygiene
University of Southern California, Los Angeles

Pascal Magne, DMD, PhD

Associate Professor, Department of Restorative Dentistry
Director, Esthetic Dentistry
University of Southern California, Los Angeles

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<http://www.llu.edu/dentistry/cde/courses/index.page?>



Dr. Caruso appointed by CODA

The Commission on Dental Accreditation (CODA) has appointed Joseph Caruso, DDS, MS, MPH; associate dean, Strategic Initiatives and Faculty Practices; professor and chair, Department of Orthodontics and Dentofacial Orthopedics, to a six-year term as a consultant and site visitor.

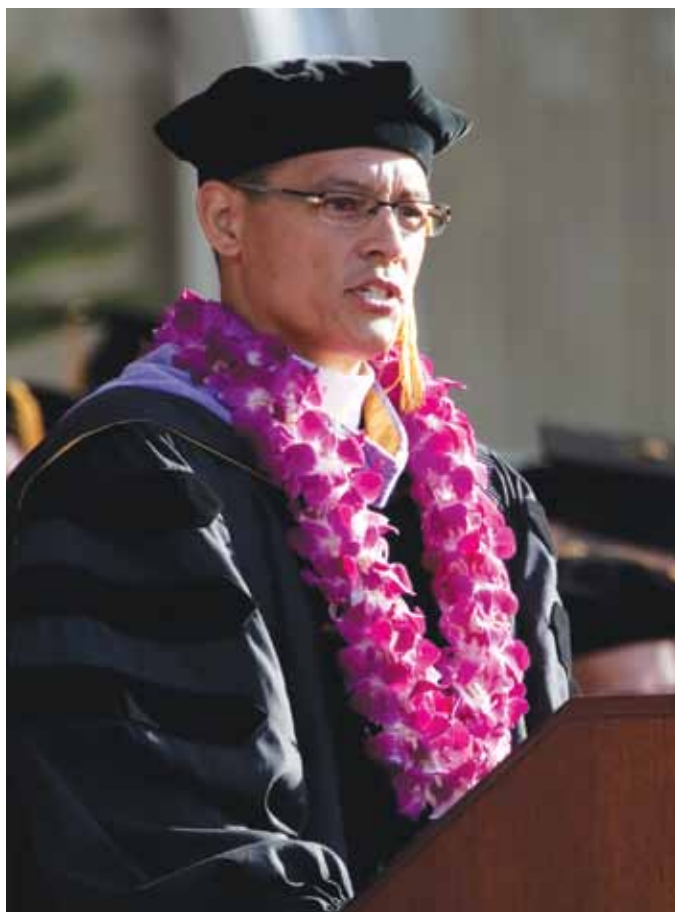
CODA is a specialized accrediting body established by the American Dental Association to ensure the quality and continuous improvement of post-secondary dental education. Dr. Caruso will be part of a team that reviews orthodontic programs to assess their compliance with CODA's standards.

SCHOOL OF DENTISTRY 55TH COMMENCEMENT

And then the sun came out.

The threatening clouds that loomed over Loma Linda University most of graduation Sunday, May 28, 2011, rolled back as if on cue at five o'clock, and the lowering sun gilded the School of Dentistry's 55th commencement service.

It was a commencement notable for the enlarging number of graduating students who were the sons or daughters of alumni. Of the 89 Doctor of Dental Surgery, 42 Dental Hygiene, 24 International Dentist, and 32 Advanced Education Programs, 15 were the accomplished



Doctor of Dentistry class of 2011 president Donavon Yapshing addresses the commencement crowd.

adult children of earlier LLUSD graduates. This increasing number attests to the School's accumulating alumni cohort and the rewarding professional education experienced by its alumni when they were students.

On baccalaureate Sabbath, the day before commencement, the School's graduating students and their families and friends participated in a University Church service that focused on the themes that explain why Loma Linda University has a School of Dentistry.

Senior pastor Randy Roberts preached a sermon that emphasized becoming a person of principle. But it was particularly stirring to hear graduating representatives from the School of Dentistry's programs address assembled family and friends and describe their commitment to the University's and School's very reason for being.

International Dentist Program graduate George Luikham (from India) was grateful to faculty who were, he said, "exemplary mentors and an inspiration" who "had modeled the culture, values, and traditions of Loma Linda" that are "distilled in four small simple words, 'To make man whole.'"

Dental Hygiene graduate Angela Wakefield recalled "the first hygiene breakout session I attended. Dr. Leslie Pollard, [PhD, DMin, MBA, then LLUAHSC vice president for Community Partnerships and Diversity], stood to pray at the beginning of the seminar and began with, 'Thank you Lord for those gathered here who are looking for a life of purpose.' At that very moment I knew, service was my calling."

Teacher of the Year Award

On commencement Sunday, before the conferring of degrees, three School of Dentistry faculty were recognized for special honors. Ron Dailey, PhD, the School's executive associate dean, presented retiring Lane Thomsen, DDS, MS, chair, Oral Diagnosis, Radiology, and Pathology, with The Teacher of the Year Award, established to recognize and honor School of Dentistry faculty whose accomplishments have had an extraordinary impact on students, faculty peers, and the School family. Dr. Thomsen, whose retirement was effective at the end of the academic year, had served the School



Dental hygiene graduate, Jordyn Gascay, celebrates with members of her family.



Graduating dental hygiene class president Chris Chu is decked with the flowers of celebration.

as chair of the Department of Oral Diagnosis, Radiology, and Pathology, for two, ten-year terms.

After reading a number of student evaluation comments that included accolades such as “Funniest teacher I’ve ever had!” “He is a great instructor.” “He is awesome!” Dr. Dailey concluded with the youthful colloquialism: “Lane, you rock!”

Distinguished Service Award

Dean Goodacre presented The School of Dentistry Distinguished Service Award to R. Leslie Arnett, Jr., DDS, MS’68, professor, Department of Periodontics, for having made outstanding contributions to the academic pursuits of the school for more than 37 years. The dean recalled being a student of Dr. Arnett’s and noted humorously that “because some students return to become colleagues it is prudent for faculty to treat their students nicely.”

As a conscious sedation on-site examiner for the Dental Board of California, the dean noted, Dr. Arnett “is much sought after on the clinic to assist students with their IV sedation patients.

“The infectious smile, uplifting demeanor, and seemingly endless energy level he has brought with his commitment to the education of his students,” Dean Goodacre concluded, “is also evident in Dr. Arnett’s community service that includes direct involvement with the American Cancer Society, the United Fund, the Pasadena Community-wide

Committee on Health Education, the American Diabetes Association as well as the Boy Scouts of America.”

Distinguished Research Award

“For more than 40 years **Joni Stephens, DH’69, EdS, MS**, professor, Dental Hygiene, has worked tirelessly teaching and leading our dental hygiene program and student research,” Dr. Goodacre began, “patiently guiding both predoctoral dental and dental hygiene students with their annual research projects. . . spending “countless hours toward making research educational, fun, and consequential.”

The evidence of this, Dean Goodacre indicated, was that “a lot of dental schools do exceptional research but few have it filter down to the student level as has happened here.” For 22 years, the California Dental Association has sponsored research competition at its annual meeting among all the dental schools in the state. Loma Linda dental students have placed first 18 times, second 8 times and third 15 times. Dental hygiene students have recorded 11 first place awards, 10 second-place, and 10 third-place awards. There is also a national competition between all dental schools, and 7 times during the last 42 years Loma Linda dental students have won first place in the national competition and 4 times they have placed second. For 10 years there has been a national dental hygiene competition, and LLUSD’s dental hygiene students have won first place 5 times.

For these and other contributions, said Dean Goodacre, “with great pleasure we now recognize Professor Joni Stephens with the 2011 School of Dentistry Distinguished Research Award.”

Dean Goodacre then introduced commencement speaker Chester W. Douglass, DDS, PhD (Temple/Harvard) who served for 30 years as chair of the Department of Oral Health Policy and Epidemiology at the Harvard School of Dental Medicine.

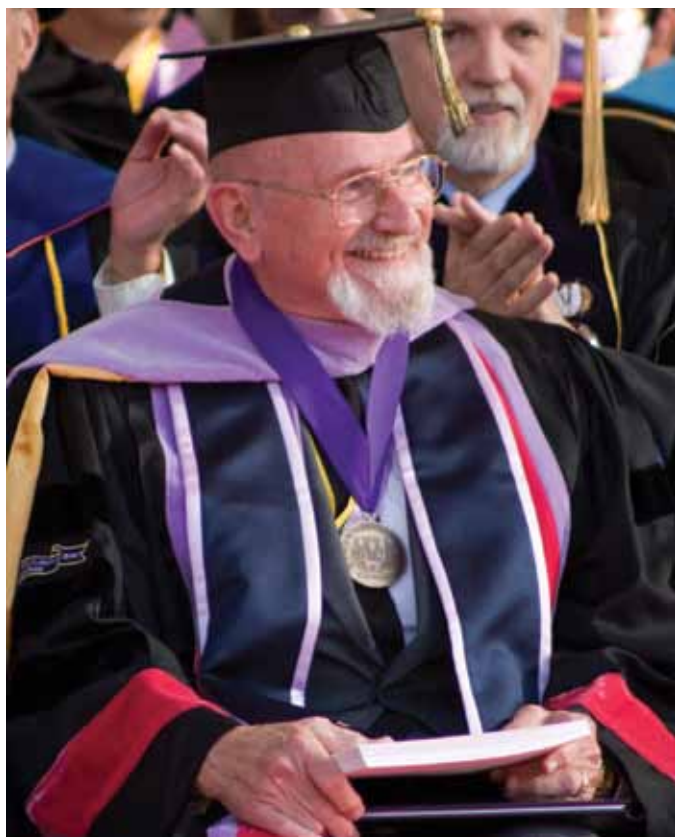


Joni Stephens, EdS, MS, professor, Dental Hygiene and Dan Tan, SD’75A, professor, Restorative Dentistry performed the marshall duties.



Dean Charles Goodacre, rejoices with Randall Szutz, SD'85, dental hygiene graduate Jessica Szutz, and Bradley Szutz, SD'05.

Although he mentioned some of the more prestigious honors Dr. Douglass has received, Dr. Goodacre was particularly interested in "the subtle and often unspoken measures of the impact one's career has had on others and, in the case of Dr. Douglass his influence on oral health care in the United States . . . [including] his classic research and data regarding the unmet dental needs present in America showed us that the need is growing faster than the supply of dental professionals who provide the required care."



R. Leslie Arnett, DDS, MS, professor, Department of Periodontics, recipient of the School of Dentistry Distinguished Service Award

At Harvard, "Dr. Douglass served as mentor to many current leaders in dental education and dentistry." Dr. Goodacre named a few dentistry luminaries, adding, "and our own Dr. Pat Naylor, associate dean for advanced dental education."

Dr. Douglass had heart-warming words for the parents and asked them to stand and be recognized for their essential part in the day's celebration.

He then charged the graduating classes with "the three new responsibilities that you accept with these diplomas: to your patients who are the priority of a successful dental practice, and of your reputation; to your profession with its several components (education, licensing policy, practice networks); and to your society, because too much is at stake not to be involved."

Brief graduate responses were given by the dentistry and dental hygiene class presidents.

Chris Chu, president of the dental hygiene class of 2011,



Dentistry graduate Christy Pogue holds her diploma with Dean Goodacre and her alumni parents Glenda, HY'81, and Maynard Pogue SD'94.

spoke of the struggles that made the class of 2011 strong. After thanking the most deserving, faculty and family, he concluded by reminding his classmates that "dentistry should be a vehicle 'to make man whole,' because 'service is our calling.'"

Dentistry class of 2011 president, Donavon Yapshing, began with a comparison of dental school to President John Kennedy's establishment of the Navy Seals "whose training pushed them to their limits, to the edge of failure."

He also quoted from President Ronald Reagan's "surlly bonds of earth" words after the Challenger tragedy, saying, "Our class has suffered its share of tragedy."

In conclusion, he cited Steve Jobs' remarks at a graduation several years ago regarding "the importance of discovering what you love and doing it."

The School of Dentistry's 2011 commencement ceremony and dusk settled together, at the very dawn of 187 oral healthcare careers.

Quest for Whiter Teeth – Trends and Traps

Michael Mebarry, DDS, MS, Sean Lee, DDS, Yiming Li, DDS, MSD, PhD

Introduction

Loma Linda University School of Dentistry held its fourth tooth-bleaching symposium on November 7, 2010. Entitled “Quest for Whiter Teeth—Trends and Traps,” the symposium was designed to help update and verify current issues relating to tooth bleaching in our profession. This article will summarize the seminar’s major points.

The desire for whiter teeth is nothing new. The earliest known historical reference to it comes from the Holy Scriptures where the author of Genesis 49:12 references “teeth whiter than milk.” In the 1800s, barbers doubled as dental surgeons who did teeth whitening by first filing them down and then applying nitric acid.¹ The acid did actually whiten the teeth; but it also significantly eroded the enamel, which no doubt led to other problems. According to a report by the ADA,² it was in the 1880’s that hydrogen peroxide was introduced for tooth bleaching, and in 1917 or 1918, the use of high-intensity lights was combined with hydrogen peroxide to speed up the bleaching process.

Advances in the science of teeth whitening languished until 1989, when the publication of Haywood-Haymann’s paper, “Nightguard Vital Bleaching,” received a lot of attention on the use of carbamide peroxide (CP) as the primary active ingredient for at-home bleaching. By the mid-1990s, the public could easily get teeth whitening products over the counter. Those commercial whiteners can lighten teeth color with mixed results. However, they are not effective in removing deeper intrinsic stains caused by medication, tooth trauma, and other factors.

Much research has been done on the three main methods of bleaching: tray bleaching also known as night-guard vital bleaching (NGVB), in-office or power bleaching, and using over-the-counter (OTC) products. Because there are so many variations in techniques and materials, when considering which technique to use, it is important to evaluate the literature pertaining to safety, efficacy, and cost. Each procedure has a risk-benefit ratio and a cost-benefit ratio. For the sake of brevity, the “bottom line” will follow.

All teeth do not reach the same whiteness, no matter which technique is used. Each tooth has a maximum whiteness beyond which it will not whiten, and teeth among different patients do not bleach at the same rate. Some lighten faster than others, and the difference ranges from days to weeks.^{3,4}

Peroxide goes through the enamel and dentin reaching to the pulp in 5 to 15 minutes; however, various studies have revealed different times and amounts of H₂O₂ penetration in the pulp chamber. Although the exact mechanism

is unknown, it has been proposed that free radicals of peroxide break down macromolecules of stain into smaller molecules or break down double bonds of stain to alter the configuration of the molecules that change the perception of the dentinal and enamel color. Given the permeability of the tooth tissues to peroxide, there is no need to etch teeth to improve permeability as some have endorsed.⁵

Tooth sensitivity is a common side effect of frequent bleaching material applications and of the concentrations of material used.⁶

Hydrogen peroxide is different from carbamide peroxide in composition. When applied to teeth, carbamide peroxide breaks down to form hydrogen peroxide plus urea. Ten percent carbamide peroxide contains approximately 3.5 percent hydrogen peroxide. Hydrogen peroxide products are active for approximately 30-60 minutes, while carbamide peroxide products remain active for two to ten hours and work better for longer application times, especially overnight.³ Carbamide peroxide products increase oral pH to above 7, reduce plaque, and also kill bacteria that cause tooth decay. Consequently, there is no need to restore small carious lesions before bleaching unless the pulp is symptomatic.⁷

Current perspectives on bleaching efficacy using different techniques

Successful bleaching of teeth depends on four main parameters: type of stain, shade or color of stain, location of stain, and characterization of stain. Ordinarily, most teeth take three days to six weeks to whiten, depending more on the individual’s tooth response than on the product used. Nicotine-stained teeth take longer, ranging from about one to three months of nightly bleaching with gels of 10 percent carbamide peroxide. Tetracycline stained teeth can be lightened much of the time; however, it may take one to twelve months of nightly bleaching using 10 percent carbamide peroxide.³ The average time for desirable results is usually three to four months.

Nightguard vital-bleaching introduces the issue of tray design. Reservoirs are not necessarily needed to bleach the teeth, unless the bleaching material is highly viscous. Although much discussion has been given to tray design, teeth bleach just as quickly with or without the reservoirs. Scallopings is needed with higher concentrations of peroxide, or with patient/dentist concerns for tissue irritation from tray contact. However, it has been suggested that when the scalloped tray design is used, reservoirs are usually needed.⁸

Thermoplastic trays made by the dentist in the office for direct placement in the mouth may offer an attractive alternative to traditional impression and tray fabrication, especially with young patients or for use with orthodontics.³

Overnight bleaching with trays is most practical for tetracycline stained teeth. The prognosis for successful bleaching of tetracycline staining depends on the color of the stain (gray is the most difficult color to bleach). The location of the stain also affects the prognosis, with the gingival portion being harder to bleach (because of thicker and different characteristics from the gingival dentin) than the incisal portion of the tooth.⁹

A single, in-office treatment usually may not yield the same outcome as tray bleaching systems. A combination of a single in-office quick start followed by tray bleaching to complete the process can have good results,³ but it will also increase patient cost and pulpal sensitivity. In-office bleaching usually produces a bigger insult to the pulp because of the high hydrogen peroxide concentrations and extensive dehydration. In cases where patients prefer in-office bleaching alone, their appointments should be scheduled about one week apart.¹⁰ This will allow the pulp to recover from the previous insult. Often the recommendation is to premedicate with non-steroidal anti-inflammatory drugs before and during the bleaching treatment to reduce tooth sensitivity.¹¹

Bleaching lights look impressive to the patient but do not appear to make a significant difference in long-term outcome; although initially they seem to assist whitening, the change in appearance may largely be attributable to the result of enamel dehydration. There is a color relapse in a week or two that often requires further bleaching treatment.^{11,12} The outcome in combination bleaching is the same with or without the in-office treatment. The best time to evaluate the success of in-office bleaching is at least two to six weeks after treatment. This allows time for the shade to stabilize.¹⁴

There is some evidence that in-office bleaching with a plastic sheet barrier or a tray is more effective than the traditional in-office bleaching technique.¹³ New improvements in in-office bleaching with paint-on "rubber dams," cheek and lip retractors, and lower concentrations of peroxide are making it safer for the dentist and the patient.

Do over-the-counter (OTC) products work, or are success claims just manufacturer's hype? There is a wide variety of these products, including strips, wraps, trays, and paint-ons. Some of these significantly bleach teeth, while others do not make a clinical difference in tooth color.¹⁴

The biggest concern dentists should have for the use of OTC products is the lack of dental examination before bleaching. Bleaching teeth may camouflage serious, undiagnosed dental problems that need attention. The OTC products that can be effective typically need some type of barrier to maintain the peroxide in place, so OTC strips, wraps, and tray products can be somewhat effective. The European directive is that

OTC products can be purchased only with an examination and prescription by a dentist. This helps to avoid masking signs of pathology such as teeth darkened from abscesses, decay, or resorption, and improper use of over-the-counter products.¹⁵ In some cases OTC products may provide similar effectiveness to that of certain whitening dentifrices. This is because they do not change the color of the tooth, but just remove extrinsic stains from the tooth surface. However, some have been shown to etch the teeth.¹⁴ There is a variety of size and shape among patient dental arches that does not always coincide with the standardized OTC product designs. The difference can lead to teeth lightened unevenly in the arch or even an unevenly bleached full smile.

Is there an age limit for the use of bleaching? How young can patients safely bleach their teeth? Generally it is thought that patients are candidates for bleaching when they are 10 years of age or older.^{16,52} At that age many of the permanent teeth have erupted or are in the process of eruption. The primary teeth are generally milk-white already, and there is usually no need for bleaching. However, for young people having problems with tooth discoloration, it may be better to bleach the teeth than wait and have them deal with the embarrassment of mockery by their peers.⁵² Young teeth have large pulps, but they also have large apices and good blood supply, so that tooth sensitivity is usually not a problem during bleaching. Pulpal damage has not occurred with 10 percent carbamide peroxide.¹⁷ A line of demarcation will not be seen on the unerupted part of the tooth when it is bleached before its complete eruption.

When bleaching the teeth of children, non-scalloped, non-reservoir trays should be used because they seal better, use less material, and are more comfortable to wear.³ Thermoplastic trays may do well for mixed dentition bleaching, and are cost- and time-effective. Tooth darkening from trauma with no existing pathology would be the only indication for primary tooth bleaching.¹⁸

Clinical considerations for diagnosis, post bleaching procedures and controlling sensitivity

It is easy to fall into the trap of seeing bleaching as non-invasive and starting treatment without a second thought. After all, there are numerous OTC products, mall bleaching boutiques, and recipes found on the internet. But beware; bleaching treatment should not be initiated until after a proper dental examination is performed. This must determine a diagnosis for the cause of the discoloration, and should include radiographs when questions exist.³ The pre-bleaching exam should rule out any pathology that may need attention. The examination should also include a discussion with the patient of all the treatment options, as well as consider any existing restorations. Existing restorations most likely will not bleach, making them seem darker than at the beginning of treatment, an outcome that may trouble patients. Patient

expectations need to be addressed to determine whether they may have other esthetic needs that bleaching alone will not accomplish.

The patient should be informed that there are several potential causes for discoloration (abscessed teeth, caries, internal or external resorption, etc.) that bleaching may disguise. All pathology needs to be disclosed and dealt with properly; therefore, other treatments may be required before (or instead of) bleaching.

Do bleaching products affect existing composite restorations and post bleaching bonded restorations? Composite and glass ionomer restorations usually do not change color with bleaching, and their surface hardness is not significantly affected by low concentrations of home-use bleaching materials or higher concentrations of in-office bleaching materials.^{19,20} However, Yu *et al.* found that bleached restorative materials in their study (Hybrid Composite, RMGI, and GI) exhibited greater staining susceptibility after bleaching than did a non-bleached group of materials. The hybrid composite restorative showed the least staining of the three groups tested.²¹ While existing composite resin restorations may or may not need to be replaced, depending on a result of the metamerism affecting the material, the patient should be informed beforehand of all possible replacements in their esthetic zone.

Concerning the resin bonding immediately after bleaching, there are several theories on how bleaching affects the tooth surface, including a poor bonding surface due to changes in the enamel structure—the result of mineral loss from the tooth surface, an increased porosity due to the loss of prismatic form, or residual oxygen from the peroxide that inhibits resin polymerization. A closely related assumption is that bond inhibition can result from bleaching agents that cause oxygen to penetrate and concentrate on the surface of the enamel, thus inhibiting the cure of some resin tags.^{22,23} Nonetheless, studies report a decrease in bond strength up to 28 percent, but usually when the composite has been bonded immediately after the completion of a bleaching procedure; the bond strength returns if a waiting period of 14 days is observed after bleaching.²³ Therefore, the bottom line on this subject is that the dentist should wait two weeks after bleaching before composite bonding to allow bond strengths to return to normal. If a lengthy bleaching time and/or higher bleach concentrations are used, more time should be allowed (as a washout period) for oxygen to escape the tooth surface and for remineralization of the enamel prisms.

The dentist should also wait for a minimum of two weeks for shade stabilization. When longer bleaching times or higher concentrations of peroxide are involved in the process, up to six weeks should be reserved for color stabilization.^{24,25}

All practitioners who have conducted bleaching procedures will sooner or later report 25-75 percent tooth sensitivity with classic tray bleaching and from 10-90 percent

with in-office procedures.^{27,28} Browning and Swift found that the higher the concentration of bleaching product, the higher the incidence of sensitivity.²⁹ Gonzalez-Ochoa found that mild histological changes were observed in the pulp when 10 percent carbamide peroxide (CP) was used in a tray overnight. These changes were considered reversible and no moderate or severe changes were observed.³⁰ This finding agrees with most empirical observations that the majority of the sensitivity subsides uneventfully within a day or two of bleaching cessation. In most cases the sensitivity peaks at day three or four then decreases with time.

So what are options for controlling bleaching sensitivity? First would be prevention. For those patients who report pre-existing sensitive teeth, the dentist should have them use desensitizing toothpaste for two weeks prior to beginning the bleaching process. Beyond this preventive measure, there are two main approaches to controlling bleaching sensitivity: (1) “passive treatment,” which is basically reducing the wear time and/or increasing the time between bleaching episodes; and (2) “active treatment.” Active treatment includes a number of options: brushing with desensitizing toothpaste for two weeks before starting the process, and placing desensitizing agents in the bleaching trays for 10-30 minutes before or after each bleaching session, as needed. More recently, the addition of potassium nitrate or amorphous calcium phosphate (ACP) to bleaching materials has reduced, but not eliminated, sensitivity. It is important to note that the presence of sensitivity is the most common cause for patients to discontinue bleaching.³¹

For cases where there is moderate to severe sensitivity, one can try desensitizing gels containing 3-5 percent potassium nitrate. UltraEz (Ultradent Products Inc, South Jordan, UT), for example, can be used in bleaching trays for overnight wear. A combination of “passive” and “active” modes of desensitizing procedures often helps to control bleaching sensitivity. There may be rare occasions when even with the aid of anti-inflammatory analgesics, sensitivity pain cannot be adequately controlled. In such cases, cessation of bleaching may be necessary, and alternative restorative options such as resin bonding, veneers, or crowns may need to be considered.

Gingival irritation is more likely than pulpal irritation with the use of OTC products.³² If gingival irritation exists, one should make sure that there is no irritation from the bleaching tray itself.

Bleaching strategies for difficult/challenging cases

Often a patient may present with a specific challenge such as white spots, dark spots, mottling or tetracycline stains. These situations can be addressed, but caution is advised in considering the patient's expectations because one cannot always accurately predict the final results in these scenarios. However, it is usually well worth the attempt, as noticeable improvement is most often achieved.³³

White spots do not bleach, but may be less noticeable if the surrounding tooth structure color is lightened. The reduction in contrast makes the white spots less noticeable. White spots may go through a splotchy stage during bleaching, but the splotching usually disappears. Because of this, bleaching should be continued until the base color of the tooth reaches its maximum lightness.³⁴ If a white spot surface is not fluoride-rich or glazed, amorphous calcium phosphate (CPP-ACP) may effectively remineralize the lesion and reduce the white spot's opacity. If a lesion is more than one third through the enamel, remineralization may not be achieved.³⁵ Etching and abrasion may also be used to prepare the fluoride-rich or glazed surface for CPP-ACP application. The infiltration method may be another effective treatment for white spots. Micro-chemical abrasion will often remove white spots if they are shallow; but if they are deeper and do not respond to more conservative treatment, macro-abrasion can be used in combination with resin bonding.

Brown discolorations usually respond differently than white spots. This type of discoloration is very responsive to bleaching, and is successful approximately 80 percent of the time.³⁶ Brown discoloration raises the subject of bleaching Tetracycline or similar drug-induced staining (Figure 1). Patients who take Minocycline for long periods should be cautioned about the staining potential that accompanies extended acne treatment. Tooth staining from this medication often is manifested in patients in their 20s and early 30s.

Another challenge is the single dark tooth. The primary cause for this condition is most often related to injury either by traumatic dental injury or injury from disease. First of all, pulpal status should be determined—vital or non-vital. A vital tooth may have become dark due to trauma and resulting hemorrhage into dentinal tubules. This can happen with or without the loss of pulpal vitality. Other common causes for vital and non-vital tooth discoloration are internal or external resorption, calcific metamorphosis or pulp canal obliteration (PCO), and decay or leaking restorations on the proximal or lingual surfaces. A tooth that received endodontic treatment may also later darken, especially if there is a loss of seal at the endodontic access opening. Not all nonvital teeth require endodontic therapy. If there are no radiographic evidence of pathology and no clinical symptoms, based on vitality testing alone, there is no reason to initiate endodontic therapy because PCO endodontic treatment usually is not recommended if no periapical radiolucency or symptoms are present.³⁸ Because trauma is often the cause for a single dark tooth, a dental history should be used to help determine the etiology. A thorough dental history can be very helpful, as it can take anywhere from one to twenty years after the injury before pulpal problems become evident. Treatment bleaching modalities for the single dark tooth may involve at home or in-office methods. For the at home method there are two main options; one is to use the typical NGVB tray and have



Fig. 1. Tetracycline stained teeth with 10% CP (Maxillary arch only), before (above) and after (below) 3-4 months of bleaching



Treatment and photos provided by Van B. Haywood DMD, professor, Department of Oral Rehabilitation, College of Dental Medicine, Georgia Health Sciences University.

the patient place material only on the affected tooth until it reaches the color of other teeth (Figure 2). This method provides the option of bleaching other teeth as desired with the same tray. A second method is to fabricate a conventional non-scalloped, no-reservoir tray and then remove the teeth molds on either side of the dark tooth. The patient is given the tray and is instructed to apply bleaching material only to the single dark tooth mold and wear the appliance overnight. This process may take up to eight weeks.³⁸ If the single dark tooth gets lighter than the adjacent teeth, daytime bleaching in short intervals should be used to avoid getting the adjacent teeth lighter than the single dark bleached tooth.

The endodontically treated single dark tooth may be treated from the inside, the outside, or both. The decision to penetrate the tooth depends on whether the treating dentist is aware of (1) the extent of the pulp chamber debridement during endodontic therapy and (2) the height in the chamber of the cement and filler.

Color science in tooth bleaching

Effective and appropriate bleaching requires adequate knowledge of color science in tooth shade taking, matching, and evaluation. When patients report for recall or assessment of bleaching progress, most practitioners hear the question, "Are my teeth getting whiter?" What is a good way to verify progress and satisfy patients' concern about whether their time and money (and maybe pain) have been worth it?



Fig. 2. Before (above) and after (below) single tooth bleaching for 6 weeks (10% CP), a fabricated tray was modified to bleach only tooth #8.



Treatment and photos provided by Van B. Haywood DMD, professor, Department of Oral Rehabilitation, College of Dental Medicine, Georgia Health Sciences University.

One method that enables the patient to make a positive assessment is to bleach only the maxillary arch first, then treat the mandibular arch after lightening the maxillary arch. This actually offers two benefits. First it allows the patient to make a direct comparison between bleached teeth and unbleached teeth simply by looking in the mirror. Second, it minimizes the impact of tooth sensitivity throughout the process—making it more comfortable and likely that the patient will be able to finish the treatment.

In regard to shade determination, what is the best way to measure tooth color scientifically? Which shade guide or instrument should be used? As a quick review on color science, the $L^*a^*b^*$ (also called CIELAB) color space was devised in 1976 (Figure 5). The three coordinates of the $L^*a^*b^*$ are represented by (1) L^* (Y axis) for the lightness or value of the color where $L^* = 0$ yields black and $L^* = 100$ indicates diffuse white (2) on the X axis, a^* represents the red-green where negative values indicate green with positive values being red (3) on the Z axis, b^* represents blue yellow colors where the negative values indicate blue, and positive values indicate yellow. The X and Z axes, and their relationship to the Y axis, describe the Hue and Chroma (saturation) of the color (Figure 3). Using the $L^*a^*b^*$ formula allows numerical quantification of colors that can be used in data management for scientific

assessment. The change in color, ΔE , can be calculated by using any two colors in $L^*a^*b^*$ format with the following formula: $\Delta E_{ab^*} = \sqrt{(L_2^* - L_1^*)^2 + (a_2^* - a_1^*)^2 + (b_2^* - b_1^*)^2}$

As teeth are being bleached, their value increases and their Chroma decreases; often the opacity will increase also. The most common way to assess color change is to use a shade guide. The Vita Classical shade guide has been used most extensively over the years, but it lacks colorimetric uniformity and linearity within the 16 shade tabs (shade guide units or SGUs), which may result in inaccuracies when using visual comparison.³⁹ Paravina *et al.* conducted a comparison of shade guides using colorimetric instrumentation and found that the new Vita Bleachedguide 3D-Master (Vident, Brea, California) exhibited the widest and most consistent color range and recommended its use for assessment of bleached teeth.⁴⁰ The Vita Bleachedguide 3D-Master (BG) is also more useful for comparisons between color change units and SGUs when visual instrumentation is used.

Is the eye as accurate as instruments devised for tooth color assessment? In a bleaching study using both visual shade guide and spectrophotometer assessment, Meireles *et al.* found that “there was no significant difference between the two groups in terms of shade change difference with either the spectrophotometer or the shade guide.”⁴¹ Another study by Meharry *et al.*, using the Vita Classical shade guide and the Easyshade Compact (Vident, Brea, California), had similar results and concluded that “the shade guide data are closely related to spectrophotometer L^* and a^* values.”⁴² Overall data appear to indicate that repeatability and accuracy of instrumentation is as good as or better than the human eye in color shade assessment.

Proper use of a shade guide for consistent and accurate assessment is a skill that can be learned especially by using the newer Vita 3D shade guides. A training program is available online at the Society for Color and Appearance in Dentistry (SCAD) website (www.scadent.org/dcm).

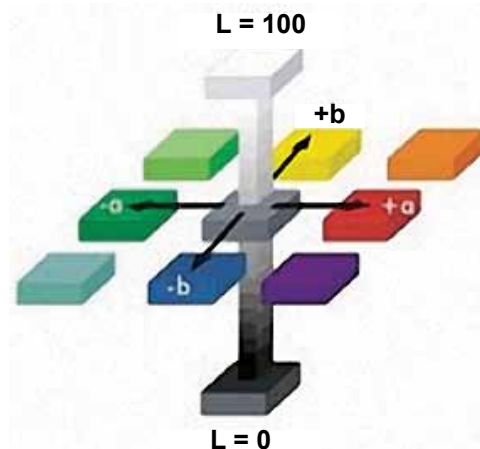


Fig. 3. The $L^*a^*b^*$ color system is based on a uniform color space.

Post bleaching shade stability

Clinical studies by Leonard, Haywood, and others have shown that six months active treatment with 10 percent carbamide peroxide NGVB is effective. These studies show results of 86-95 percent success in bleaching teeth—at least a two or more Vita Classical shade change. They also reported that 33 percent of patients had no obvious regression of shade over a period of 118 months, and 60 percent were satisfied with their bleaching results after 90 months.^{9,37} Studies like these show that Tetracycline stained teeth can be bleached with relatively good predictability and good stability for those who persist with a long-term protocol. Six months seems like a long time, but it can pay off.

Risks concerns and safety issues

Long-term safety of tray bleaching has been established through four- and ten-year recalls.⁴³ Enamel is not significantly affected by low concentrations of bleaching material (assuming a normal diet), though fluoride in the product appears to be helpful.²⁴ Higher concentrations of hydrogen peroxide may have some minor effects on dentin.⁴⁴ A review of all articles published in both the United States and Europe on bleaching safety has determined that materials of 10 percent carbamide peroxide are safe to use after a proper dental examination. Hydrogen peroxide has the potential to interact with DNA, and concerns for the carcinogenicity and co-carcinogenicity of hydrogen peroxide have been raised. However, so far there is no evidence of cancer risks associated with tooth bleaching.⁴⁵⁻⁴⁸

There have been concerns that if the bleaching material is ingested there may be adverse systemic effects as well as local adverse effects on enamel, pulp, and gingiva because of the direct contact of the material with these tissues.⁴⁸ Research has shown that hydrogen peroxide is an irritant as well as being cytotoxic, and concentrations of 10 percent or higher of hydrogen peroxide are potentially corrosive to mucous membranes or skin, and can cause a burning sensation as well as tissue damage.⁴⁸ Even with this in consideration, there seems to be inadequate uptake of hydrogen peroxide to cause significant adverse effects because the oral cavity is capable of decomposing hydrogen peroxide at a sufficiently rapid rate.⁴⁹

One other concern among some in the dental community is whether tooth bleaching causes mercury release from amalgam restorations. Reports regarding the amount of mercury release associated with bleaching vary significantly. The potential health implications of the mercury released from dental fillings remains controversial and yet to be determined. Because of the known toxicity of mercury, as a general rule, caution is advised not to perform bleaching for those whose teeth are extensively restored with amalgam.⁵⁰

Summary and conclusions

Tooth bleaching to improve tooth color has become an accepted and popular aesthetic dentistry procedure. In a review that compared nine published studies, Matis *et al.* ranked the effectiveness of the four main types of bleaching systems in decreasing order: the dentist-prescribed NGVB, dentist-prescribed daytime tray bleaching, in-office bleaching with at home tray follow-up, and OTC products.⁵¹

Research over the last 20 years has indicated no significant, long-term oral or systemic health risks when professional assisted at-home tooth bleaching using materials containing 10 percent carbamide peroxide is used. However, tooth bleaching does involve risks such as tooth sensitivity and gingival irritation in a significant proportion of patients. In most cases these are mild to moderate, transient, and easily reversible. When gels of higher hydrogen peroxide concentrations, such as those for in-office bleaching and some OTC products, are used without adequate gingival protection, severe mucosal damage can occur.

Reporting problems with OTC products is limited because so little scientific data are available on the safety of OTC at-home bleaching. The safety of bleaching performed at mall kiosks, salons, spas, and cruise ships is of particular concern, because the bleach materials are similar to that of in-office bleaching but not performed by dental professionals.⁵⁰ Effective, predictable, and safe tooth bleaching is possible, but it requires accurate diagnosis of the causes of tooth discoloration or stains. Therefore, the involvement of dental professionals in the tooth bleaching process is highly advisable and prudent.

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"Quest for whiter teeth" authors (L-R):

Michael Meharry, SD'80, MS, associate professor, Department of Restorative Dentistry

Sean Lee, DDS, professor, Department of Restorative Dentistry, director of clinical research, Center for Dental Research

Yiming Li, DDS, MSD, PhD, professor, Department of Restorative Dentistry, director, Center for Dental Research

Bleaching Symposium quiz

Circle the letters of the correct answers.

1. Bleaching teeth is relatively new to dentistry. It was first started when described by Haywood and Haymann in a paper in 1989.
 - a) True
 - b) False
2. Peroxide goes through the enamel and dentin and reaches the pulp in
 - a) 5 to 15 minutes.
 - b) 30 to 60 minutes.
 - c) 1 to 2 hours.
3. Successful bleaching of teeth depends on
 - a) type of stain.
 - b) shade or color of stain.
 - c) location and characterization of the stain.
 - d) all the above.
4. Most teeth take three to six weeks to bleach with NGVB of 10% CP. When bleaching tetracycline or nicotine-stained teeth,
 - a) one should continue up to four weeks then stop if no change is noticed.
 - b) nicotine stains can be removed but tetracycline stains cannot.
 - c) much of the time these stains can be removed by bleaching up to 12 months.
5. Regarding tray design for NGVB, reservoirs and scalloping are usually needed for good results.
 - a) True
 - b) False
6. Disadvantages of single in-office bleaching treatment include:
 - a) It usually will not yield the same outcome as tray bleaching.
 - b) It will often take an average of three in-office visits for its maximum effect.
 - c) In-office bleaching produces a bigger insult to pulp.
 - d) a, b, and c.
7. Which statement regarding OTC products is not true?
 - a) Some significantly bleach teeth and some make little difference.
 - b) Their quality and peroxide concentrations vary significantly.
 - c) Dentists' biggest concern is the lack of dental examination before bleaching.
 - d) Their usage is due to manufacturer's marketing and they don't work.
8. Which statement below needs consideration in planning treatment for "the single dark tooth"?
 - a) A dark tooth caused by trauma may or may not have lost its pulpal vitality.
 - b) Possible causes include resorption, calcific metamorphosis, decay or leaking restorations.
 - c) It can take from 1 to 20 years post injury before pulpal problems become evident.
 - d) All statements are important and should be considered.
9. For assessment of bleaching progress or color change,
 - a) the Vita Classical shade guide is most extensively used and is most accurate.
 - b) Vita Bleachedguide 3D-Master exhibits the widest and most consistent color range.
 - c) visual shade guides do not correlate well to spectrophotometer instrumentation.
 - d) there is no advantage to bleaching the maxillary arch first, followed by the mandibular arch.
10. In regard to safety/risks involved with tooth bleaching,
 - a) risks such as pulpal and gingival irritation are insignificant.
 - b) high hydrogen peroxide concentration gels need no gingival protection when used.
 - c) the proven safety of OTC products negates the need of a professional dental exam.
 - d) 20 years of research signify the safety of dentist assisted at-home NGVB with 10% CP.

Name _____ DDS/DH Lic.# _____

Date _____ Mailing address _____ / _____ / _____

Phone _____ Street City State Zip code

After answering the questions and completing this form, mail the entire sheet (or photocopy) to:

LOMA LINDA UNIVERSITY Continuing Dental Education, 11245 Anderson Street,
Suite 120; Loma Linda, CA 92354 or you may fax completed form to (909) 558-4858

For questions please call: (909) 558-4685

Cost \$25.⁰⁰ Please circle: AMEX VISA DISCOVER Credit Card No: _____

Expiration date _____ CVS No: _____

NOTE: LOMA LINDA UNIVERSITY SCHOOL OF DENTISTRY IS AUTHORIZED TO CONFER 2 HOURS OF CALIFORNIA CONTINUING DENTAL EDUCATION CREDIT FOR THIS HOME STUDY COURSE.

School of Dentistry awards student achievements

The Damazo Amphitheater in the Jetton Pavilion of Loma Linda University's Centennial Complex was the site (May 27, 2011) for the presentation of most of the 58 achievement awards received by School of Dentistry students. The awards and the recipients are listed below.

American Dental Society of Anesthesiology Horace Wells Award

Recipient: Larina Chu

Academic of Excellence Gold Awards

Recipients: Scott Arceneaux, SD'11; Adam Burr, SD'11; Chris Chang, SD'11; Andrew Corbett, SD'11; Michael Hiersche, SD'11; Joanne Oh, SD'11; Christy Pogue, SD'11; Thomas Szutz, SD'11; Ralitza Varlakova, SD'11; Kirollos Zakhary, SD'11

Academic of Excellence Silver Awards

Recipients: Michael Knutson, SD'11; Jeffery Lam, SD'11; Shaun Lee, SD'11; Jessicah McGraw, SD'11; Carrie Anne Carman, SD'11; Mohammed Tabel, SD'11; Lee Tetz, SD'11

Academy of General Dentistry Award

Recipient: Jeri Bullock, SD'11

Academy of Operative Dentistry Award

Recipient: Joanne Oh, SD'11

Academy of Osseointegration Implant Dentistry Outstanding Dental Student

Recipient: Jeri Bullock, SD'11

Alpha Omega Certificate of Academic Achievement Award

Recipient: Andrew Corbett, SD'11

Alumni Association Award

Recipient: Donavon Alexander Yapshing, SD'11

American Academy of Implant Dentistry

Recipient: Sophia Sellas, SD'11

American Academy of Oral and Maxillofacial Pathology Award

Recipient: Andrew Corbett, SD'11

American Academy of Oral and Maxillofacial Radiology Award

Recipient: Jeffery Lam, SD'11

American Academy of Oral Medicine Award

Recipient: Alexis LaRose, SD'11

American Academy of Orofacial Pain Award

Recipient: Michael Hiersche, SD'11

American Academy of Pediatric Dentistry

Recipient: Ralitza Varlakova, SD'11

American Academy of Periodontology

Recipient: Ralitza Varlakova, SD'11

American Association of Endodontists

Recipient: Eric Hull, SD'11

American Association of Oral and Maxillofacial Surgeons Award

Recipient: Michael Knutson, SD'11

American Association of Oral Biologists

Recipient: Patrick Hachee, SD'11

American Association of Orthodontists Award

Recipient: Jeffery Lam, SD'11

American College of Dentists, Southern California Section

Recipient: Scott Marc Arceneaux, SD'11

American College of Prosthodontics Award

Recipient: Adam Burr, SD'11

American Student Dental Association

Recipient: Adam Burr, SD'11

Ben W. Oesterling Award

Recipient: Brooklin Pruehs, SD'11

California Association of Oral & Maxillofacial Surgeons Award

Recipient: Steve Nelson, SD'11

California Dental Association Community Leadership Award

Recipient: Nathan Leiske, SD'11

California Dental Association Senior Award

Recipient: Scott Arceneaux, SD'11

CDA Foundational Dental Student Scholarship Award

Recipient: Kevin Prates, SD'13

Clinic Awards

Recipients: Jeri Bullock, SD'11; Adam Burr, SD'11; Larina Chu, SD'11; Michael Hiersche, SD'11; Michael Kim, SD'11; Landon Libby, SD'11; Klara Palhegyi, SD'11; Brooklin Pruehs, SD'11; Donavon Yapshing, SD'11; Ralitza Varlakova, SD'11; Morris Jose De Leon, IDP'11; Andriy Shevchuck, IDP'11

David Lee Anderson Departmental Award

Recipient: Albert Kang, SD'11

David Lee Anderson Tuition Scholarship

Recipient: Filip Orban, SD'11

Delta Dental Student Leadership Award

Recipient: Jeri Bullock, SD'11

Dental Foundation of California Scholarships

Recipients: Scott Marc Arceneaux, SD'11; Jeri Bullock, SD'11; Ralitza Varlakova, SD'11

Dentsply Student Clinician Award

Recipient: Vanessa Browne, SD'12

Excellence in Esthetic Dentistry Award

Recipient: Klara Palhegyi, SD'11

Excellence in Prosthodontics Award

Recipient: Andrew Corbett, SD'11

Fixed Prosthodontics Department Award

Recipient: Jessicah McGraw, SD'11

G. Hartzell & Son Clinician Award

Recipient: David Green, SD'11

Graduate Implant Dentistry

Recipient: Michael Hiersche, SD'11

ICOI & Camlog USA Dental Pre-doctoral Achievement Award

Recipient: Christy Pogue, SD'11

International College of Dentists Award

Recipient: Ralitza Varlakova, SD'11

Kenneth Wical Award

Recipient: Kevin Shearer, SD'11

LLU Center for Dental Research Basic Science Award

Recipient: Jason Mashni, SD'12

Omicron Kappa Upsilon

Recipients: Scott Marc Arceneaux, SD'11; Carrie Anne Carman, SD'11; Larina Hui-Ai Chu, SD'11; Andrew Irvine Corbett, SD'11; Michael Alan Hiersche, SD'11; Mohammed Reza Jabbari, IDP'11; Jonathan Brian Jackson, SD'11; Jeffery Wei-Fong Lam, SD'11; Alexis Christine LaRose, SD'11; George Luikham, IDP'11; Jessicah Lauren McGraw, SD'11; Joanne Jieun Oh, SD'11

Omicron Kappa Upsilon – William S. Kramer Award

Recipient: Morse Stonecypther, SD'12

Overall Clinic Awards

Recipients: Nathan Leiske, SD'11; Ramzi Saman, IDP'11

Pacific Dental Services Scholarship

Recipient: Vanessa Browne, SD'12; Kyle Ewert, SD'12

Pierre Fauchard Academy Award

Recipient: Michael Hiersche, SD'11

Pierre Fauchard Academy Scholarship

Recipient: Michael Flewelling, SD'12

President's Award

Recipient: Michael Hiersche, SD'11

Prince Award

Recipient: Donavon Alexander Yapshing, SD'11

Riverside Dental 4th Year Tuition Scholarship

Recipient: Clark Bassham, SD'12

Service Learning Awards

Recipients: Albert Kang, SD'2011; Devin Rentz, SD'11; Kirolos Zakhary, SD'11

Southern California Academy of Endodontics

Recipient: Mohammad Tabel, SD'11

Southern California Academy of Oral Pathology Award

Recipient: Jessica McGraw, SD'11

Southern California Society of Dentistry for Children

Recipient: Stephanie Calvillo, SD'11

Western Society of Periodontology Award

Recipient: Lee Tetz, SD'11

Wil Alexander Award

Recipient: Nathan Leiske, SD'11

Wilfred A. Nation Award

Recipient: Eric Joo, SD'11

Special Recognition Awards

Graduates recognized for Elective Program completion

Scott Areneaux

Implant Dentistry Honors Program
Oral Maxillofacial Surgery Special D4 Honors Program
Senior Advanced Clinical Program

Jeri Bullock

Implant Dentistry Honors Program
Senior Advanced Clinical Program

Adam Burr

Dental Anesthesiology Honors Program
Conscious Sedation Honors Program
Senior Advanced Clinical Program

Larina Chu

Dental Anesthesiology Honors Program

Andrew Corbett

Dental Anesthesiology Honors Program
Orthodontics & Dentofacial Orthopedics Honors Program

Justin Libby

Senior Advanced Clinical Program

Landon Libby

Senior Advanced Clinical Program

Jessica McGraw

Orthodontic & Dentofacial Orthopedics Honors Program

Devin Rentz

Implant Dentistry Honors Program

Ralitza Varlakova

Pediatric Dentistry Honors Program

CDA appoints Curtis Vixie

The California Dental Association has appointed Curtis Vixie, SD'89, chair of the 2011 CDA Well-Being Committee. "He has been actively involved in the strategic well-being planning and has a clear understanding of the three-year plan and program goals," said CDA Council on Membership chair Steven Cohen, DDS.

office staff inform the Well-Being Committee, anonymously, that due to excessive and habitual alcohol consumption their favorite dentist is placing patients at risk. The Well-Being Committee initiates an intervention, which requires the dentist's participation in an evaluation/assessment by an approved treatment facility.



Dr. Vixie, with his wife (and LLUSD alumnus), Linda Drury Vixie, DDS, and his daughters Taylor (with braces) and Jordyn on a diving trip to the small island of Kri (in the Raja Ampat Archipelago) that turned into an impromptu treatment session.

The CDA Well-Being program reflects the Association's concern about the effects of alcohol and/or chemical dependency on dental professionals, their families, and patients. The program provides a resource to the dental community in identifying and assisting individuals who may suffer from alcohol and/or chemical dependency through its component and regional well-being committees. It also serves as a referral source for other disorders and impairments such as sexual addiction, Parkinson's disorder, glaucoma, diabetes, depression, bi-polar disorder, sexual boundary issues, and etc.

Dr. Vixie has been involved with the Northern California Dental Society's Well-Being Committee since 1995. What really happens, typically, he says, is that family members or

According to Dr. Vixie, who knows from personal experience, the Well-Being Committee's intervention process works. This is due to the involvement of a Higher Power, peer support, accountability, and the looming fear of dental board involvement.

Annual trips to provide dental care to populations in far-off destinations—such as Nepal, New Guinea, and Indonesia—where there are no dental services is now the highlight of Dr. Vixie's years. And it is his delight to be taking his daughter, Taylor, who attends Upper Columbia Academy, on a forthcoming service trip to Namibia.

Dr. Vixie particularly enjoys his opportunities to guest lecture at his alma mater, as he will be this March, in dental classes focusing on personal development.

Golden donation

Gary Golden, SD'76, assistant professor, Restorative Dentistry, recently contributed a Canon EF 100mm f/2.8 Macro IS USM Lens to the School of Dentistry's Educational Support Services. It is the first lens on the market to incorporate Canon's new Hybrid Image Stabilization Technology that effectively compensates for both angular and shift camera shake during close-up shooting. The lens was developed to expand users' photographing range and allow a wider range of users to easily enjoy macro photography.

Worth about ten dollars per millimeter, the gift came after casual shoptalk between Dr. Golden and LLUSD photographer Daryl Osborne.

It wasn't that long ago that Dr. Golden donated to Educational Support Services a Cannon EOS 5D Digital SLR camera. When he thought of selling it, Dr. Golden's second thought was, "Why not give it to my photographer friends at Ed Support and take a tax write off?"

"The camera and the lens are perfectly compatible," says Osborne "and we are grateful for this welcome addition to our repertoire of photographic equipment."

The School of Dentistry is fortunate to have Dr. Golden on its faculty, not only for his generosity and his clinical and professorial competence, but because he is the unlikely survivor of a cerebral aneurism that he suffered in 1989, seven years before he joined the LLUSD faculty. Born and raised Southern Baptist in the state of Kansas, Dr. Golden's family moved, after he graduated from high school, to Downey,



Daryl Osborne receives the new lens from Dr. Golden.

California. He worked for a year and a half as a clerk for North American Aviation, the prime contractor for the Apollo Moon project. He then decided to join the military.

He spent four years in the Air Force at Norton Airbase in San Bernardino. Toward the end of that four years, he met his wife-to-be, a Seventh-day Adventist Norwegian immigrant, on a blind date. They married in 1970. Dr. Golden then spent two years in college—one at San Bernardino Valley College and a second at La Sierra College, before being accepted into the then three-year

doctor of dentistry program at LLUSD.

He graduated from the School of Dentistry in 1977 and spent seven years in San Antonio, working off his school debt to the Air Force the first three years and then completing a residency in prosthodontics at the University of Texas, San Antonio, and Lackland Air Force Base. Dr. Golden's Air Force position took him to Elmendorf Air Force Base, Alaska, for six years and then to Travis Air Force Base near Vacaville, California, for five years, concluding his 23 years in the Air Force.

His interest in photography developed after he purchased

an SLR for intraoral photography that was required for his residency in prosthodontics. And when he moved to Alaska, Dr. Golden says "there were post cards everywhere you look." In 1987 he won first place in the Alaskan Air Command's annual Photo Contest for his photograph of a Dall Sheep standing on a lofty promontory just outside Anchorage.



Dr. Golden's Dall Sheep prize winner

LLUSD alumnus honored by BALL

For his personal and professional contributions, the Black Alumni of Loma Linda & La Sierra universities (BALL) honored LLU School of Dentistry alumnus Lloyd E. Stoll, SD'62, as the 2011 BALL alumnus of the year during its 27th annual scholarship banquet February 26 at the Los Angeles Marriott.

Born in British Guyana (now the Cooperative Republic of Guyana) on the northern coast of South America, Dr. Stoll's earliest years were spent in the Charity district along the Pomeroon River. The eldest of four brothers, he attended Catholic school for his first three grades, and then relocated to the country's capitol, Georgetown, where he attended several grades at an Anglican school before completing the elementary grades at the first Seventh-day Adventist school in that city.

Dr. Stoll attended Caribbean Union College, Union College in Lincoln, Nebraska, and La Sierra College (now La Sierra University) where he graduated with a Bachelor of Arts degree in bi-

ology. He then earned his Doctor of Dental Surgery degree from Loma Linda University School of Dentistry in 1962.

The dental clinic for the employees of the Local 770 grocery stores in Hollywood, California, provided Dr.

Stoll with his first work as a dentist. After three years in Hollywood, he moved to Watts, California, to work at the Watts Community Health Center run by the University of Southern California.

In 1969 Dr. Stoll opened a solo dental practice on the campus of the White Memorial Medical Center—a practice he has maintained for 42 years.

For the past 22 years Dr. Stoll has been involved with Guyana Medical Relief (GMR)—a non-profit organization (composed primarily of expatriate Guyanese) that raises funds to provide medicine and hospital supplies to seven government and two denominationally owned hospitals

in Guyana. He also serves as the liaison between GMR and Davis Memorial Hospital, a Seventh-day Adventist facility in the country's capitol.

Dr. Stoll is the president of the Southern California Chapter of the University of the Southern Caribbean, and has been a leader in the Berean Seventh-day Adventist Church in Los Angeles for the past 48 years.

Dr. Stoll is married to the former Pat Gauff. The couple raised three sons—Jeffrey (deceased), Michael, and Anthony—and has one grandson and four granddaughters.



Dr. Lloyd E. Stoll (right) receives the 2011 BALL Alumnus of the Year Award from Leroy A. Reese, MD. Holding Dr. Stoll's plaque is his wife Pat

Department of Dental Hygiene program opens in Coachella Valley's Palm Desert

In a triangle formed by Dinah Shore Drive, Gerald Ford Drive, and Monterey Avenue, the School of Dentistry has established a new, two-year dental hygiene training program in the Riverside County town of Palm Desert in the Coachella Valley 66 miles east of Loma Linda University.



Two views of the School of Dentistry's Palm Desert location for its new, two-year training program in dental hygiene.

At a cost of approximately \$500,000, the School has built out a 10,411-square foot space at 34-280 Gateway Drive in the Class A-rated Pointe Monterey Business Park less than a third of a mile from Interstate 10.

Opening with the fall 2011 quarter, the three-year associate degree program in dental hygiene will matriculate 28 transfer students from College of the Desert, five miles south on Monterey Avenue. The faculty from College of the Desert will provide the general education and biomedical science prerequisite education, and faculty from Loma Linda University will provide the dental hygiene science and clinical training for the program (a teaching staff of seven, including a part-time dentist and board-certified hygienists).

"The goal of providing this eastern desert community with increased access to dental care and oral health training is exciting," Kristi Wilkins, DH'80, MA, chair, Department of Dental Hygiene, told the Desert Sun. "A dental clinic offering care for under-served groups will also be part of the program," she added.

Prerequisite courses taken on a full-time basis, will take Coachella Valley students approximately one year to complete. The dental hygiene training will require seven quarters over 21 months of full-time training. Students will be eligible to take the National Dental Hygiene Board written examination after six quarters of dental hygiene training and will be eligible to sit for



the clinical State and/or Regional licensing examinations at the end of their dental hygiene training.

The seven-quarter dental hygiene program will cost students approximately \$52,000, and create career pathways for high-paying jobs, while enhancing the availability and quality of oral healthcare in the Coachella Valley.

LLUSD generational service in Guam

Many years ago, two young dental graduates, Richard Parker, SD'68, and Franklin Ordelheide, SD'68, accepted mission appointments to the island of Guam, ready and willing to use their new skills on the local Chamorro people. The year was 1968, and the P&O teams were the second and third dentists at the newly established Guam Seventh-day Adventist Dental Clinic. Now, some 43 years later, their sons, Chad Ordelheide, SD'04, and Scott Parker, SD'08, are 'crowning' and 'implanting' their dads' patients in the same clinic.

The dental department of the Guam SDA Clinic began in 1966, when Dr. Wiley Young acquired and installed some antique dental equipment in the two oversize closets he used as his operatories. Many alumni may recognize Dr. Wiley's name, as he helped establish many clinics and shared his skills around the world.

Guam has always had a large U.S. military presence, but when the P&O team arrived, its 50,000 civilians had two dentists, and one of them was the acting governor of the island. Dr. Young had left earlier, so when Drs. Parker and Ordelheide opened their door for business, they had plenty of patients, plus an instant waiting list which hung over their heads for the next four-plus years.

"Looking back," they say, "it was amazing that we were able to function in our small quarters," but they were "promised" a new clinic soon, so worked a split schedule and kept the doors open six days a week. Although they sat next to each other in the dental school lab for four years, and then lived on Guam as neighbors for several years, they could never explore Guam together on Sundays, because one of them was always working.

Fortunately, the SDA Clinic stuck to its word, and opened its doors to a new state-of-the-art facility in 1970. With six operatories, additional dentists worked various shifts to maximize its use. Over the years it has evolved and it now has five hygiene and eight dental operatories.

Shortly after the dental department moved, the cramped medical portion of the clinic was also able to

move to an adjacent new building on some thirteen acres of land.

Dr. Parker practiced in Guam for five years and then taught at the Medical College of Georgia for four years. Returning to California, he taught at Loma Linda University School of Dentistry for 18 years before continuing his present full time dental practice in Calimesa, California. Besides teaching, Dr. Parker has been very active in sponsoring and participating with students on their service learning missionary trips. He and Bonnie now reside in Yucaipa, California.



The Parker and Ordelheide families, now three generations strong, reunite in Guam (L to R): Chad Ordelheide, SD'04, with Ashlyn, Shoshanna Ordelheide, DH'03, Franklin Ordelheide, SD'68, Sharon Ordelheide, University of Guam SN'69, Richard Parker, SD'68, Bonnie Parker, LSU'66, Scott Parker, SD'08, and Erika Parker, LLUSM'04, holding Zoe.

The Ordelheides worked on Guam for four years and then in a "free agent" exchange of dentists, the O's went to Hong Kong Seventh-day Adventist Hospital Dental Clinic and Dr. Wayne McFarland and family came to Guam, where he could educate his children at the local academy. The Hong Kong practice boomed, and soon Dr. Ordelheide's classmate, Virgil Erlandson, also SD'68, joined him. After practicing a few years in the states, the Ordelheides accepted a call to the dental clinic in Blantyre, Malawi, Africa. For the next six years, Dr. Ordelheide worked with Ken Pierson, SD'71, and Les Bergstrom, SD'72. Dr. Ordelheide is retired in Oakdale, California.

The current Parker/Ordelheide Guam teams recently gave birth to baby girls, Zoe and Ashlyn respectively (now one-year olds); thus the occasion for the photo op with the grandparents seen on this page. Life on Guam, though considerably modernized from the 1968 days, continues to offer a slower paced island lifestyle that the current families enjoy. Presently, scuba diving and photographing the reefs' small wonders are the popular spare time adventures, and "if you didn't get a picture of it . . . you didn't see it." Of course easy access travel to Asia, Australia, Japan, and Philippines is an added bonus.

Dr. Chad Ordelheide, and his wife Shoshanna, DH'03, have been on Guam for six years. Dr. Scott Parker has been there two years. His wife Erika, LLUSM'04, practices family medicine at the clinic. The need continues for dentists and hygienists who would like to serve overseas.

2010 Legacy of Leadership

We gratefully acknowledge the support of those who have made a personal commitment to advance the mission of education and service at Loma Linda University School of Dentistry. Philanthropic support is essential as dental professionals of tomorrow are educated today. The School of Dentistry is strong because alumni, friends, faculty, and staff work together.

Voluntary support of more than \$4,200,000 came to LOMA LINDA UNIVERSITY (LLU) from School of Dentistry alumni and friends during the calendar year ending December 31, 2010.

Please join us in celebrating the legacy of leadership by those whose names appear on the following pages. Listed first are donors who have graduated from Loma Linda University School of Dentistry with a doctor in dental surgery (DDS), including those who received this degree through the international dentist program (IDP). Following the DDS class roster are donors who have graduated from the dental hygiene program, the dental assisting program, those who have received an advanced degree, those who have graduated from other LLU schools. The last roster contains the names of non-alumni friends of the School of Dentistry.

Dean's Circle members for 2011 (*those who demonstrate generous philanthropic support to the School of Dentistry with an annual gift of \$1,500 or more*) are indicated in **regent red type**. An asterisk* appears before the names of those who are **Century Club** or **Ivory Society** members (*those whose annual gift is \$100 or more*). Names in gray type indicate the donor passed away in 2010.

Charles J. Goodacre, DDS, MSD — Dean
 Rachel Terwilligar, CFRE, CSPG — Director of Development
 H. Maynard Lowry, PhD, CSPG — Director of Gift Planning & Special Gifts
 Cindy Libby, MBA — Development Assistant

DOCTOR OF DENTAL SURGERY (DDS)

Class of 1957

*Charles W. Beckett, Jr.

Lowell C. Dobyns
 Weldon J. Hagen
 *Robert J. Homer
 *George Kuniyoshi
 *Hilbert Lentz, Jr.
 *Roger W. Lindner
 *Willis L. Schlenker
 *Ronald Zane

Class of 1958

*Jack W. Griswold
 *James L. McCulloch
 *Delbert W. Parks
 E. Earl Richards

Class of 1959

*Wilber A. Bishop, Jr.
 *John A. Butler
 *William H. Heisler

*John N. Oliver

*Richard D. Pfeiffer

*James A. Thompson
 *Alan R. Williams

Class of 1960

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 *Jack R. Booker
 *Donald L. Bowen
 *Gordon L. Byrd
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 *Ronald J. Fasano
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 *Rodney V. Longfellow
 *Steven G. Morrow
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 *Dale S. Pyke
 *Benjamin H. Robson
 *Arvin E. Taylor
 *Thomas Thompson
 *William G. Tym
 *Joseph S. Uniat

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 *Lloyd L. Johnson
 *Carlton R. Lofgren
 *Hugh C. Love, DDS
 *Llewellyn L. Mowery
 *Nels Rasmussen, Jr.
 *Arthur Spent
 *C. Duane Vitelle
 *G. Gene Wilson
 *Gordon T. Wimer

Class of 1962

*Gerald L. Alderson
 *Donald L. Beglau
 *Herbert Church, Jr.
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 *Billy J. V. Hover
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 *L. Albert Lewis
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 *W. William Maddox
 *George T. Matsuno
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 *Clyde J. Crowson
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 *Eugene D. Voth
 *Frank M. Wall
 *Eugene V. Warner

Class of 1964

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 *Frank E. Bonnet
 *Eldon C. Dickinson
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 *Dwayne L. Nash
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 *Anthony G. Theodorou
 *Simon W. Trenchuck
 *Duane R. Wacker

Class of 1965

*Delmer E. Bond, Jr.
 *Noel E. Kirkby
 *Robert W. Meckstroth
***W. Eugene Rathbun**
***Marlene M. Schultz**
 *Jerry M. Wolf

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***Ernest N. Chan**
 *Calvin R. Devnich
 *Norman D. Ensminger
 *H. Clifford Johnson
 Richard W. Ludders
 *Douglass B. Roberts
 *Ed Rouhe
***David B. Sandquist**
 *Hans J. Sawatzky
 *Kelvin Su

Class of 1967

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***Gilbert L. Dupper**
***Andrew D. Harsany**
***Howard Y. B. Kim**
 *John W. Kizziar, Jr.
 *Bruce C. Parker
***Robert L. Roy**

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***Gary Cornforth**
 *Charles A. Cutting, Jr.
***Clelan G. Ehrler**
 *Virgil O. Erlandson
 *William E. Knecht
 Philip C. Opperman
***Franklin C. Ordelheide**
***Richard L. Parker**
***Gordon M. Rick**
 *J. Douglas Russell
***Clifford R. Tym**
 *H. C. Van den Hoven

Class of 1969

*Ronald E. Cox
***David L. Johnson**
 *Frederick J. Mantz
***R. Wayne Martin**
 *Glenn H. Murphy
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Ellis Jones: artist, cartoonist, friend

April 16, 1926 - December 5, 2010

Ellis Jones, director of LLUSD's graphic arts studio, 1968 to 2000, applied a deft hand—and unmistakable wit—in executing his tasks. A compatible fit in the School, he was at home in the creative environment he found. He, too, was making impressions.

Born April 16, 1921, in Oakland, California, Mr. Jones worked at an oil refinery for two years after graduation from Oakland High School. Then on a three-year tour of duty with the navy, he survived with all his crew after their ship was struck and sunk by enemy fire in Japanese waters.

At Redlands University and then at Choinards Art Institute in Los Angeles he honed his graphic arts skills, with particular emphasis on cartooning. Initially pursuing a sign painting career, he easily moved into graphic design, creating posters and illustrations with a characteristic flair.

Introduced to Adventism at Orange Show meetings conducted by an evangelist, Fordyce Detamore, Mr. Jones became a member of the Mountain View Adventist Church, and of its successor, the Arden Hills Church, where he frequently served as head elder. He credited his Welsh heritage with his ability as a vocalist. With a fellow vocalist, he performed duet concerts in more than 25 Southern California churches.

Invited in 1968 by Dean Judson Klooster to use his skills at the School of Dentistry, he became a valued colleague of faculty members, providing enhancement to the students' learning process. He would do "cartoon kinds of things" that would "get things across," says Dr. Doug Roberts, SD'66, professor and chair of restorative dentistry, who engaged Jones's services.

Colleagues recall the sign he prepared for the late Dr. Robert Kinzer's door

after being commissioned to create a do not disturb sign. Jones's football figures appeared on the sign with the words, "I'm tackling today. Please intercept later." He continued his work at the School until shortly before his 80th birthday.



Ellis Jones

Active in the community, Jones joined eight friends to found Loma Linda Lopers. Today more than 1,000 members are eligible to wear the Loper shirts bearing a coyote logo designed by Jones. At the age of 60 he went on the first of eight Honolulu marathons in which he participated. He also championed the cause of Alcoholics Anonymous, lecturing in various venues with a personal testimony of his commitment to remain a "dry" alcoholic. Hans Diehl, DHSc, MPH, clinical professor, Preventive Medicine, recalls Jones's drawings for health publications, with the comment, "He did so

much free gratis illustrating for the CHIP (Coronary Health Improvement Project) program's publications." He also provided drawings, posters, and signs for Glendale Adventist Hospital, White Memorial Medical Center, and Simi Valley Hospital.

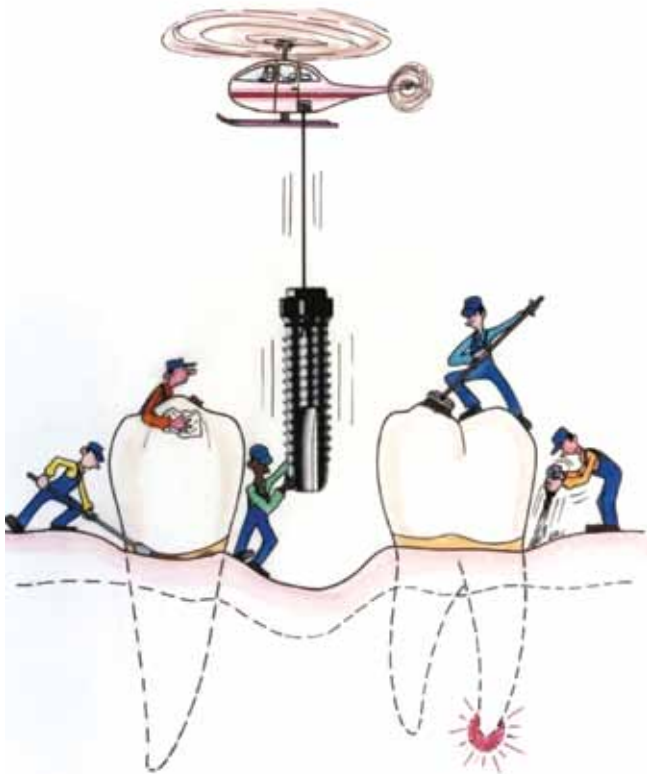
A current display of his cartoons and drawings in the School's lobby commemorates the artistic and meticulous works of this man who died on December 5, 2010. And examples of his humor in art can be seen on the following page.



Ellis in a typical pose at his Educational Support Services easel.

Remembered for his sense of humor and his easy manner of making friends, Mr. Jones will be missed by those friends and by his wife of 38 years, Marian Christine; his two children, Gordon of Redlands and Shari Baylus of Cherry Valley; two stepchildren, Diane Gardner of San Bernardino and Richard Newton of Dallas, Texas; two grandchildren and two step grandchildren.

from the Ellis Jones Gallery of Dental Humor



Charles T. Smith, DDS, dean emeritus 1914-2011

Dr. Charles Thomas Smith was born March 22, 1914, to a San Diego couple—Sydney A. and Lydia Ellen Smith. Eight years earlier, his father's dental practice had been destroyed in the 1906 San Francisco earthquake. He moved to San Diego and resumed practice there in his brother-in-law's medical office. Dr. Smith was soon appointed president of the San Diego County Dental Society (founded in 1887), and would pass on the love of dentistry and leadership to his son, Charles.

Charles' parents introduced him to a very active family life of church, home and school activities. He quickly realized the importance of study and hard work in achieving goals. He sold newspapers and the *Saturday Evening Post*, saved his money and bought his own Model T when he was fourteen years old.

La Sierra College and Pacific Union College were the sites of Dr. Smith's undergraduate education. After graduating in 1940 from the College of Physicians and Surgeons School of Dentistry in San Francisco (now the University of the Pacific School of Dentistry), he returned to San Diego to join a small group practice with his father and Dr. Charles G. Giddings.

Following in his father's footsteps, in 1949 young Dr. Smith became president of the San Diego County Dental Society—after only eight years in the profession. He served on several SDCDS committees, and subsequently was appointed to Council membership on the Education Advisory Committee (later becoming its chair) of the Southern California Dental Association.

Dr. Smith was one of the three founders (with Drs. Damon Vanasen and James Vernetti) of the Children's Dental Health Center in San Diego, which still provides dental services and education to the underprivileged children of that metropolis.

Having replaced his father, Dr. Sydney Smith, when he retired from the chairmanship of the county dental society's dental public health committee, Dr. Charles Smith was a prominent advocate in dentistry's effort to secure legislation to fluoridate the San Diego water supply as a preventive dentistry public health measure.

Dr. Smith married Ruth Anita Anderson in May 1935. Two children joined this union—Charles Thomas Jr. (Tom) and Charlyn Ruth Smith. Ruth Anita Smith died in December 1978; and in July 1979, Dr. Smith married Mary Lou Sessums. By 2011, he had eleven grandchildren and nine great grandchildren.

Because during World War II he had been designated vital to the San Diego community's health, Dr. Smith was exempt from military service. However, during the Korean War he became a major in the U.S. Army Reserve Dental Corps and served with the Army's dental clinics at Fort Bliss in El Paso, Texas. He said that was the first time in his professional career that he could work from 7 a.m. to 3 p.m. and then be home with his children in their after-school and evening hours.

Dr. Smith's first faculty appointment as a part-time assistant professor of restorative dentistry began two months after the School of Dentistry's first class graduated in 1957. Dr. Smith drove from San Diego each week to contribute a full

day of instruction in clinical dentistry, often carpooling with future dean Judson Klooster of Escondido, who was then also part-time LLUSD faculty.

When Dr. Smith was appointed dean-elect in 1959, he obtained post-doctoral education by visiting and spending time with administrators of various dental schools around the country, including those in Michigan, Maryland, North Carolina, Tennessee, and UCSF. These were some of the most respected dental institutions in the country. From them he learned many skills in the administrative areas of running a dental school—skills that would be valuable in the deanship of a relatively new school, such as Loma Linda University School of Dentistry.

Appointed dean in July 1960, Dr. Smith began immediately to build on the foundation established by his predecessor, Dr. Webster Prince. The sponsoring of clinical faculty for advanced training and post-doctoral master's degrees was continued and enhanced. The nascent advanced education program in orthodontics was provided a broader adminis-

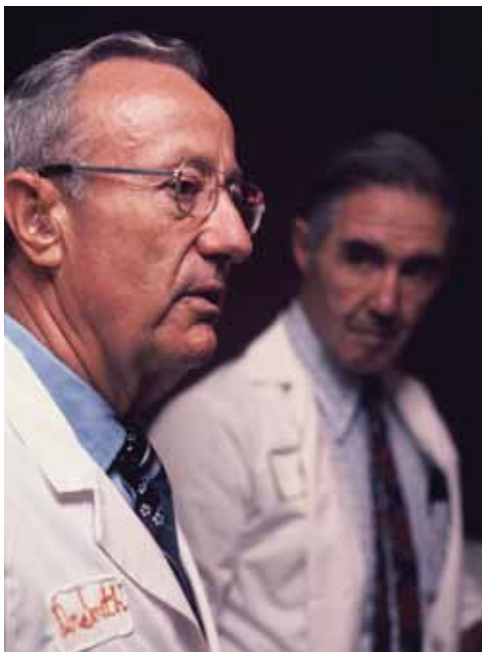


Charles T. Smith as a young dental professional

trative base. Over the next few years, new graduate programs were established in oral and maxillofacial surgery, endodontics, periodontics, oral pathology, and pediatric dentistry.

In 1959, at the very beginning of Dr. Smith's administrative leadership, the baccalaureate-level program in dental hygiene was launched, grew, and thrived with Dr. Gerald Mitchell as its director; and in 1968, a dental assisting program was born.

Under Dr. Smith's leadership, the first off-campus clinical service program was established in Monument Valley, Utah. Resident faculty supervised the students who experienced rotations of clinical clerkship in this unique setting on the Navajo Indian reservation as a part of their pre-doctoral dental education. Opportunities for service learning in domestic and international settings at a wide variety of locations around the world multiplied.



Dr. Smith in a clinical setting

participated with missionary dentists to provide dental services to people in remote locations where no dental care was otherwise available.

With the support of College of Medical Evangelists (now Loma Linda University), President G. T. Anderson, Dr. Smith and his colleagues designed the expansion of Prince



Dean Smith shares a laugh with his friends A. Graham Maxwell, PhD (left), and (later) Dean Judson Klooster, DDS (right).

To ensure his personal acquaintance with the opportunities and experiences LLUSD graduates and other mission dentist appointees would encounter, Dean Smith and his wife circled the world in 1965 visiting Adventist mission dental clinics. In most of these settings, Dr. Smith participated

with missionary dentists to provide dental services to people in remote locations where no dental care was otherwise available.

With the support of College of Medical Evangelists (now Loma Linda University), President G. T. Anderson, Dr. Smith and his colleagues designed the expansion of Prince

Hall to provide additional space for clinical, research, and teaching activities that had been promised Dean Prince when the building was first erected.

After retiring as dean of the School of Dentistry in June 1971, Dr. Smith worked for two years in the U.S. Bureau of Health Manpower. He then joined the University of Texas at San Antonio faculty in its department of preventive dentistry. In that capacity he initiated UTSA's mobile clinic program and designed its dental assisting program before becoming its associate dean for student affairs.



Dr. Smith enjoying retirement.

When he retired from his work at the University of Texas, Dr. Smith and Mary Lou settled in the Palm Springs area from where, as dean emeritus, he often participated in School of Dentistry and LLU activities, such as the Alumni Association Board of Directors meetings, Alumni Student Conventions, and graduation events.

Most important of all, Dr. Smith's loved ones report that he went to his final rest peacefully on April 21, 2011, knowing that his tough and tender love for his God and for all of God's children, especially the young people of his family and of the Seventh-day Adventist church, had been worth every bit of his enthusiastically expended life energies.

Dr. Smith's family requests that gifts in his memory be made to the School of Dentistry Dean's Fund or to the Adventist Development and Relief Agency.

William Palmer

Growing up in Takoma Park, Maryland, the site of Adventism's administrative offices, William Palmer, DDS, faced the accomplishments of his groundbreaking forebears. His grandfather, E. R. Palmer, assisted Ellen White in Australia with the establishment of Avondale College. Dr. Palmer's father, C. E. Palmer, served many years as the manager of the Review and Herald Publishing Association. Small wonder that the Takoma Park boy developed a vision of worlds to conquer.

Enroute to adulthood, Dr. Palmer developed compensations for dyslexia; friends found that he could see patterns that they didn't notice in the environment.

He also mastered the skills of a builder, obtained a pilot's license and flight instructor credentials.

As an army medic Dr. Palmer sought to learn medical techniques—such as bladder intubation insertion—to prepare for unforeseen emergencies. Preparedness orientation became his modus operandi. Thereafter he routinely carried an array of compact emergency medical devices in his car.

Dr. Palmer earned his Doctor of Dental Surgery at the University of Southern California in 1953. His management of an apartment complex during dentistry training and successful sale of the complex when he left was so competent that the owner gratefully liquidated his dental school bill.

After two years of dental practice in Bishop, California, Dr. Palmer became the youngest member of the fledgling School of Dentistry faculty in Loma Linda. He was voted Teacher of the Year every year of his faculty appointment. He was a prized recruit to the new faculty staff as well, being the sole possessor of a license to practice dentistry in California. In his career, he would amass additional licenses, at one time holding eight licenses concurrently.

Spearheading the School of Dentistry's first student mission trip (1957) on a shoe string budget, Dr. Palmer traversed 4,000 miles with students on an Amazon River mission launch in Peru and Ecuador. After treating patients in each jungle village, his dental staff placed dental forceps in the hands of a likely candidate, who received rudimentary instruction on extractions. The newly credentialed village



Dr. Bill Palmer

dentist upgraded the local practice of extracting an aching tooth with a stick.

The Amazon trip became a seminal event in LLUSD's achieving recognition with the accreditation agency. Skeptical that LLUSD's mission objective was window dressing not likely to be accomplished, the accreditors subjected Dr. Palmer to a series of questions. His response, a graphic report of the Amazon trip, convinced the accreditation team that LLUSD was supporting a distinctively worthy mission.

The Amazon trip also shaped the direction of Dr. Palmer's career. Thereafter he was in and out of mission appointments, linking his practice with health evangelism. He established a clinic in Puerto Rico. While teaching anatomy to medical students at Washington University, Kansas City, he prepared the syllabus textbook, *A Body Hast Thou Prepared Me*. In Colorado, he oversaw the development of Eden Valley Institute, a life style center and retreat. With students from Loma Linda he developed a Better Living Center in Maryland.

Joining Dr. Lloyd Baum, he became involved in the development of a new dental school program at Montemorelos University, Mexico. To collect an exceptionally large donation of equipment for the burgeoning school, Drs. Palmer and Baum drove to northern California. Loading a truck under time constraints, Dr. Palmer spotted a forklift machine; locating the keys to the machine, he used the forklift for efficient loading to meet a departure deadline. Yes, he assured the surprised Dr. Baum, he possessed a current forklift operator's permit.

Seeking to practice dentistry in a region where people would be receptive to spiritual values, Dr. Palmer pursued a practice in Corinth, Mississippi, begun (on mission salary) at the Better Living Center sponsored by the church's local conference. Under his leadership and influence, a church building and congregation was established in Corinth. A skilled boatman, he navigated the various inland locks and channels of Mississippi and Tennessee in order to provide emergency dental care to an underserved population. His water craft, a model of efficiency, boasted a folding dental chair, an air compressor to operate dental hand pieces, and supplies for fillings and extractions.

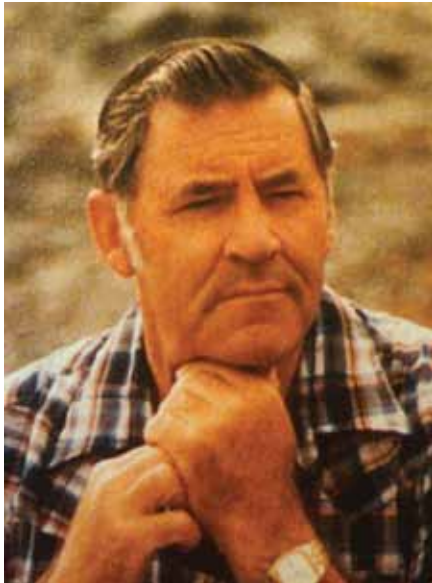
Struggling with ill health in his final months, Dr. Palmer still served as a frequent phone consultant for dental colleagues. His wife Marybel reported that the day before his death (in Purvis, Mississippi, on November 21, 2010) he was asserting, "I want to live out God's mission for my life," a wish that his family, colleagues, and patients testify was realized.

Dr. Palmer was preceded in death by his wife of 49 years, Carolyn, who died in 1996. His survivors include his wife Marybel of Brentwood, CA; his son Brent (wife Brenda) of Corinth, Mississippi; daughter Marquis Feese (husband Tom) of Purvis, Mississippi; four grandchildren, two great grandchildren, and his wife's four children and many grandchildren.

Wilbur Bline

Wilbur Eugene Bline, SD'65, died February 3, 2011, at Mat-Su Regional Medical Center in Wasilla, Alaska, after a brief illness.

Born in Walla Walla, Washington, on September 10, 1926, Dr. Bline lived in Milton-Freewater, Oregon, and farmed the Washington and Oregon valleys for many years. For his performance in the armed services during World War II he was decorated with the army's sharpshooter bar for first-class gunners. In 1954 he married the love of his life, Darlene Wolford; subsequently he was farming, playing baseball, and rearing his children.



Dr. Wilbur Bline

Deciding to change career directions, Dr. Bline moved with his family in 1956 to California, where he completed dental education at LLUSD in the class of 1965. For the next 20 years, he practiced dentistry in Alaska, becoming active in both the Alaska and national dental societies.

When his youngest child, Greg, was 6, was diagnosed with autism, helping the child reach his fullest potential became a driving force for Dr. Bline and his family.

An avid fisherman and hunter, he was happiest on the water. Whether it was deep-sea fishing for halibut or faster-paced salmon fishing, he delighted in sharing the experience with his family, friends and relatives.

Dr. Bline was survived by his wife of nearly 60 years, Darlene, who died April 14, 2011; and by his children, George (Diana) Bline of Wasilla, Glori (Roger) Strickler of Big Lake, Alaska, Carol of Grove City, Ohio, Greg of Wasilla, and Linda Elder of Eugene, Oregon. Dr. Bline is also survived by five grandchildren and five great-grandchildren.

The family requests that friends wishing to honor Dr. Bline's memory contribute to Hope Community Resources of Alaska, which has provided helpful assistance for his son Greg with autism, or the Autism Society of America, Alaska Chapter.

Robert Erickson

Often left to his own devices as an only child, **Robert Erickson**, SD'67, born July 31, 1929, grew up a lover of books, the movies, and the Boston Red Sox.

Dr. Erickson met and married Ruth Skala of New York City in 1951 when both were pursuing nursing at New England Sanitarium in Massachusetts. Sponsored by New England Sanitarium, Dr. Erickson earned a nurse anesthetist license at Madison Hospital, Tennessee, completing an internship at Hinsdale Hospital in Chicago.

Now the father of three daughters, Dr. Erickson determined to pursue dentistry.

He completed predoctoral requirements at Columbia Union College in Takoma Park, Maryland, before entering LLUSD's class of 1967. He earned a master's in public health the same year.

His career path took Dr. Erickson to practices in Fontana and Riverside, California, then to South Lake Tahoe. Returning to Loma Linda, Dr. Erickson taught at LLUSD for two years before finally putting down some permanent roots in Placerville, California, where he continued his practice until 1993. His patients loved him for his gentle treatment, generosity, and sense of humor.

Additionally, Dr. Erickson pursued his interests in stained glass, geology, and theater. He produced memorable performances in *Canterbury Tales*, *Fiddler on the Roof*, and *The Miracle Worker*. He also kept busy caring for the family's oak-filled five acres, complete with a view of the mountains, until ill health forced his retirement in 1993. He died on May 5, 2011.

Family members fondly recall Dr. Erickson's love and devotion, his work ethic, his mischievous sense of humor, and his passion for learning, music, drama, and ice cream at midnight. His survivors include his wife, Ruth; four children: Jeanette of Tacoma, Washington; Nancy of Torrance, California, Ruth Ann of Clackamas, Oregon, and Robert Erickson II, Granite Day California; nine grandchildren, and two great grandchildren.



Dr. Robert Erickson

James Greive

Named after his grandfather according to the family tradition, **James Henry Greive**, DDS, was born in 1925 in Concord, Sydney, Australia. He attended Newcastle Boys High School and distinguished himself at Sydney University, where he studied dentistry.



Dr. James Greive

In 1947, having completed dental school, Dr. Greive spent eight years as the resident dentist at the Warburton Sanitarium and Hospital in Sydney. Going to England (1955) to further his dental studies, Dr. Greive introduced his family to the culture, family history, and travel available in that part of the world before returning to Warburton.

Those Warburton years featured a busy dental practice with patients coming from all over Australia. At home in Sydney, Dr. Greive planted a beautiful flower and vegetable garden. He learned to bud and graft camellias flowering cherry trees, and espalier apple trees. He also pursued photography, snow skiing, sailing, and church leadership roles. He was part of the team that started the first Pathfinder Club in Warburton.

Moving to Loma Linda in 1979, Dr. Greive taught in the Department of Restorative Dentistry at LLUSD. The quality of his work soon drew the admiration of his colleagues. He also lectured in Africa and South America.

After 10 years in the United States, the Greives returned to the Lake Macquarie area in New South Wales, Australia, where Dr. Greive practiced dentistry part time until his retirement at 70 years of age. In retirement, Dr. Greive continued gardening and photography and found a new love, wood turning. He also continued trips to Russia, China, the United States, Europe, the United Kingdom, and New Zealand.

Despite a stroke at the age of 81, Dr. Greive continued to thank the Lord for "a charmed life." He died March 18, 2011, in New South Wales. His mourners include his wife, Lorna; two daughters, Estelle Everett of Visalia, California, and Dianne Butler of Wangi Wangi, New South Wales; twin sons, James of Balcolyn, New South Wales, and Adrian of Highfields, New South Wales; ten grandchildren, and eight great-grandchildren.

Clark Lamberton

Just six weeks before his death (June 2011), **Clark Lamberton**, DDS, MS'68, recalled becoming the first Seventh-day Adventist dentist to go to the Far East. He said simply, "I stayed forever." During his initial time at a dental clinic at Bangkok Hospital, Dr. Lamberton mastered the Thai language adequately to pass Thai dental boards.



Dr. Clark Lamberton

The 91-year old was obviously moved as he described having treated his final patients the previous year at the Lamberton Chiangmai Dental Clinic. When Dr. Lamberton opened his clinic, he trained local people to work there. Soon he was teaching at Chiang Mai University's new dental

school (1969) in an appointment that lasted 30 years.

During the Vietnam War, Dr. Lamberton was the one foreigner on a team going by helicopter to treat villagers that could be reached only by foot (a five-hour trek) or by air. Providing the villagers with care introduced another challenge: opium addiction. Invited to enter his clinic's opium cessation program, villagers hiked in for the program.

One opium addict, a widower with eleven children, announced his need to depart one day. Not long thereafter, the addict sent one of his sons on a five-hour trek carrying his three-month old baby. Already "medicated" with opium, the baby was in need of opium cessation. "To make a long story short," Dr. Lambert explained, "the baby recovered and remained in our care." Adopted by the Lambertons, the boy is now is "thoroughly American." Conversely, Dr. Lamberton admitted that he became "part Thai." After the death of his wife in 1991, he married his wife's best friend, Pongsri.

During a mission furlough (1968) Dr. Lamberton completed an orthodontics program at LLUSD. His extended practice continued to be self-sustaining and financially supportive of the region's mission projects. Upon reflection, Dr. Lamberton said "No, I didn't expect to stay so long in Thailand." Then he added, "I couldn't come home; they depended on me." Fifty-four years after leaving his land of birth, Dr. Lamberton commented, "Yes, if I had it to do over, I would stay that long. Thailand is home."

Satya Masih

Born in Levuka, Fiji, on October 16, 1925, **Satya Masih**, SD'71, MPH'72, was third in a family of nine. He knew none of his grandparents because both his parents had been orphaned. His first day in school, a day he never forgot, he spent



Dr. Satya Masih

under the teacher's table, hugging the teacher's feet; his father was the teacher.

Saroj, whom he met at a social gathering in 1950, introduced Dr. Masih to the Adventist church. After he joined the church, the two were married in 1951.

Aspiring to achieve a quality education, he attended Avondale College in Coorabong, Australia, where he earned a

bachelor's degree (1957) and accepted an appointment as an educator in Fiji; later he taught in Adelaide, South Australia.

In 1966 Dr. Masih and his family arrived in Loma Linda, California, where he enrolled in the School of Dentistry. Graduating with the class of '71, he continued his education at LLU School of Public Health, which granted him a master's degree in 1972. He established a dental practice in San Bernardino, which he pursued for 20 years.

He was looking forward to the 40th anniversary celebration of his class when he went for a walk on December 27, 2010, dropping to the ground from a massive heart attack. His classmate, Dean Charles Goodacre, has noted the active support that Dr. Satya and his wife gave to the class project as well as to many School of Dentistry projects in spite of his cardiac difficulties.

Dr. Satya leaves behind Saroj, his beloved wife of 59 years; Anael, his son; Rowena, his daughter; Jamie, his grandson; two sisters, three brothers, and many relatives and friends.

Kenneth Neal Jr.

The name of **Kenneth Gerald Neal Jr.**, SD'70, appears in the Centennial Pathway on the Loma Linda University campus, along with many other family members who have attended LLU. Because his father, a medic, was in Europe mopping up after the Battle of the Bulge, the C-section delivery of Dr. Neal (June 25, 1945, Long Beach, California), was assisted by his great aunt and uncle, Drs. Vera and William Clough.

Dr. Neal joined the class of '70 at LLUSD shortly after marrying Karyn Scott, who would become the mother of his two sons and adopted daughter.

During his final year at LLUSD, Dr. Neal and several classmates treated



Dr. Kenneth Neal Jr.

patients in remote villages of Guatemala. Practicing their skills in anesthesia and extractions, the students encountered anesthesia problems. Through experimentation, they discovered that the nerve they were trying to desensitize was located much higher than normal on the people of a particular village. Dr. Neal was involved in adjusting the anesthesia placement to achieve painless procedures for the villagers.

Dr. Neal established dental practice first in Ukiah, California. Moving soon to the Porterville, California, area, he became well known in the community.

Pursuing his extracurricular skills, Dr. Neal became an accomplished photographer. In his office he displayed many of the pictures taken on family road trips. Before the days of Power Point, he created memorable slides and music program at Adventist church venues.

After retirement in 2009, Dr. Neal moved to Chinook, Washington, where he spent his remaining months enjoying the view of the Columbia River. He died peacefully in his sleep on March 22, 2011.

Preceded in death by his daughter, Krista Dyan, Dr. Neal is survived by the mother of his children, Karyn Neal; by his wife of 16 years, Candace; by two sons, Robert (wife Eileen) and James, LLUSM'97 (wife Kristen), and by four grandchildren.

Family members suggest donations in Dr. Neal's memory may be made to the LLUSD Advanced Technology Laboratory.

Bill Reeves

Surrounded by his family, **Bill Reeves**, SD'72, died peacefully at home on March 19, 2011, after a long battle with PSP, a rare neuromuscular disease. Born September 17, 1936, in Carleton, Oklahoma, Dr. Reeves was known as Billy Duane in his family, where he was the second of four sons. Drafted into the army in 1959, he served at Ft. Sam Houston Army Medical Center.

He graduated from the School of Medical Technology in Hinsdale, Illinois, in 1961. He married Susan Mae Kasischke the next year, and after the birth of his two sons, Bradley Bill and Charles Nelson III, he entered LLUSD, graduating in 1972. While he was in dental school, his two daughters—Cherub Denise and Elizabeth Susan—were born.

Dr. Reeves opened his practice with offices in San Marcos and Wimberley, Texas, in 1972. He took a personal interest in serving his patients. A mark of his profession was compassionate, charitable care. He was a dedicated member and elder of the San Marcos SDA Church and was actively devoted to the San Marcos Adventist Jr. Academy, where his children attended and most of his grandchildren currently attend.

He was preceded in death by his father, Charles, his mother, Juanita, and granddaughter, Olivia. He is survived by his wife of 48 years, Susan, and children: Brad and Andrea Reeves, Charles, SD'92, and Kristi Reeves, Cherub and Steve Nelson, and Elizabeth and Jerry Tochtermann, as well as seven grandsons and six granddaughters. He is also survived by his brothers: Clifton, Cameron, and Weldon.

Dr. Reeves' life centered in his God and his family. He will be missed by many as he rests and awaits his Lord's return.

Donations in Dr. Reeves' memory may be made to the Burton Adventist Academy's Olivia Reeves Memorial Fund in Arlington, Texas, for worthy students or to the San Marcos Adventist Junior Academy building fund.



Dr. Bill Reeves

Milo Smith

Milo H. Smith, SD'60, was born on November 26, 1932, in Loma Linda, California, where his father, Lloyd Smith, was attending medical school. After graduation at Walla Walla College (1954), Dr. Smith became a member of the U.S. Army's Operation Whitecoat that was testing germ warfare. On a day off, Dr. Smith suffered a broken neck after diving off a raft in Chesapeake Bay. During his convalescence, he accompanied other wounded soldiers to the White House for lunch with President Dwight Eisenhower and various dignitaries. He never forgot the president's orders that the wounded soldiers should be served before anyone else—or the fact that the third time he visited the White House, President Eisenhower called him by name.



Dr. Milo Smith

Released from the army in 1956, Dr. Smith married Jeanie Shankel, and the couple moved to Loma Linda, where he entered dental school. Practicing after graduation initially in Fresno, he edited the *Fresno Madera Dental Society Bulletin* for several years. In November 1961, he opened a dental practice in Kingsburg, which he pursued for the next 38 years.

With the arrival of three sons, Dr. Smith and his wife participated in many family outings—exploring San Francisco or waterskiing and fishing at favorite lake sites. He and Jeanie both became licensed pilots in 1967, and flew their own plane for several years.

A member of the Kingsburg city council for 14 years, Dr. Smith's unpretentious nature emerged when the council recently discussed a dress code for its members; if wearing a tie became mandatory, he clarified, he would not be in compliance.

Following a stroke in 1998, Dr. Smith retired from dentistry. His oft-repeated advice characterized him: "Don't blow your own horn and go around telling everyone how great you are; just go around, work hard, and do good things."

Remembering his hard work and good deeds are Jeanie, his wife of 54 years; his three sons and their wives: Darrin and Brenda, Dalton and Margie, and Devon and Colleen; and 12 grandchildren.

Remembrances may be made to the Fresno Adventist Academy, 5397 E. Olive Avenue, Fresno, CA 93727.

William Taves

Surrounded by a loving family at his home in Sandpoint, Idaho, **William "Bill" Wesley (Toews) Taves, D.M.D., 95**, died peacefully on April 12, 2010.

Born on February 7, 1915, in Jamestown, North Dakota,



Dr. & Mrs. William Taves

Dr. Taves grew up on a farm where he worked many hours and played fewer. He attended schools in Dinuba, California, and later completed high school in Fresno. He pursued x-ray tech training in Los Angeles, California, where he met his future wife, Evelyn Williams. The couple married on February 20, 1940, in Lansing, Michigan.

After graduation at the Pacific

Northern College School of Dentistry in Portland, Oregon, in 1945, Dr. Taves opened a Banning, California, practice, which he later moved to Beaumont, California. His love for children sent him back to school, where he specialized in pediatric dentistry. One of his patients recalls, "Dr. Taves was my childhood dentist whom I loved so much. He was the best, and I will always remember him with fondest memories."

In the '60s, Dr. Taves taught and directed the Pediatric Department at LLUSD. He also invented a device called the "Taves Space Maintainer." He flew several times to Mexico to do mission/dentistry with the German Mennonite settlement. And he and Evelyn spent time in Guam to relieve a dentist going on a sabbatical. Hit by a car in 1975, Dr. Taves sustained injuries that eventually forced him to retire early.

In 1992 Dr. Taves and his wife moved to Sandpoint to be closer to family. An active member of his church, he enjoyed leading Bible studies, sharing his faith, reading, growing grapes, grafting fruit trees, gardening, inventing and tinkering.

Preceding his wife's death by only five months, Dr. Taves is survived by his daughters—Peggy (spouse Ken) Schauer of Sandpoint, Idaho, and Patti (spouse Scott) Miller of Scottsdale, Arizona—and by seven grandchildren, seven great-grandchildren, and one great-great grandchild.

Donations in Dr. Taves' memory may be made to Bonner Community Hospice at Bonner General Hospital in Sandpoint or to a favorite charity in Dr. Taves' name.

Clifford Vixie

A member of LLUSD's first graduating class, **Clifford Erwin Vixie, SD'57**, died March 2, 2010, in Grass Valley, California. He was 82.

Born July 20, 1928, in Berrien Springs, Michigan, Dr. Vixie

attended Andrews University for his pre-dental education, and opened his first dental practice in Ontario, California. He had married Patricia McElmurry (1961), before relocating to Nevada City in 1965, where he continued practicing dentistry until he retired. He was very proud to have his son Gregory join his dental practice.



Dr. Clifford Vixie

Known by his patients as a gentle and skilled dentist, with integrity, fairness, and high standards, he also established an excellent reputation for care at his two businesses, Spring Hill Manor and Rehabilitation And Nursing Center and Sierra View Manor Assisted Living. An ardent reader and historian, Dr. Vixie loved to travel and felt privileged to see much of the world with his family. He loved classic cars and restored a 1931 Ford Model A which remains in the family.

Supportive of his church, medical/dental missionary work and education, Dr. Vixie traveled to Guatemala and Haiti to provide missionary dental care. Most of all, he liked spending time with his family, including his grandchildren, of whom he was very proud.

He is survived by his cherished wife of 50 years, Patricia; daughters, Lisa (Terry) Winget of Coeur d'Alene, Idaho; Suzanne (Stanford) Leland of LaJolla, California; son, Gregory (Joyce) Vixie, of Grass Valley; and five grandchildren.

Toshiro Yamada

Hypothermia is believed to have led to the drowning of **Toshiro Yamada**, SD'84, on April 3, 2011. Dr. Yamada's kayak overturned during windy conditions while he was fishing at Eagle Valley Reservoir in Nevada. Onshore witnesses, hearing his calls for help from the recently frozen waters of the reservoir, had no boat for rescue operations.



Dr. Toshiro Yamada

Born in Nagasaki, Japan, Dr. Yamada completed predoctoral studies at La Sierra University. Following his LLUSD graduation in the class of '84, Dr. Yamada practiced dentistry in Houston, Texas, until moving to Newport Beach, California, where he had a very busy practice (1996-

2009), establishing a reputation for skill with complex prosthetic cases. James Nelson, SD'84, a colleague, says that Dr. Yamada gave "meticulous attention to quality," becoming known for his implant-supported, full mouth reconstructions.

Active in the dental community, Dr. Yamada was involved in study clubs and dental societies including the Academy of Osteointegration. He lectured on aesthetic and reconstructive dentistry and served as a part-time clinical instructor at LLUSD. He also delivered professional lectures at various sites in the United States as well as in Japan, where his parents and sister live.

A few months ago Dr. Yamada moved to Henderson, Nevada, where the experienced outdoorsman and avid kayaker continued to pursue his passion for fishing.

Survivors include Dr. Yamada's wife, Yoshiko, and the couple's son, Ko Yamada, a cardiologist.

Victor West

Victor West, DDO, DOrth, MDSc, associate professor on the University of Melbourne's Faculty of Dental Science, will be remembered as a genial yet meticulous visiting lecturer in orthodontics at LLUSD. As a close colleague of the late Robert Ricketts, DDS,



Dr. Victor West

MS, who had come to LLUSD as professor of orthodontics in 1971, he collaborated with Dr. Ricketts in founding the American Institute of Bioprogressive Education. Later becoming the "honorary curator" of Dr. Ricketts' vast research materials, he traveled from Australia several times a year, to categorize the materials, configuring shelves and even creating

display case titles for the collection. The display, housed in the Del Webb Library, depicts the history of orthodontics through collections of art, books, and research records. The collection contains the original research records Dr. Ricketts used to establish many of the norms currently used today in orthodontics.

A man of many competencies—researcher, accomplished singer, and lawyer—Dr. West supervised many orthodontic aspirants, and authored and co-authored a number of scientific papers and texts. His closing words in the preface to the English edition of *Introduction to Bioprogressive Therapy*, which he edited, exemplify his indefatigable professionalism: "The directive of the desirable level of skill [in wire bending and use of pliers] is a simple one—practice, practice, practice."

Perhaps it was his legal training that emerged when Dr. West happily presided at seminars where participants argued over orthodontic issues. In one such session he initiated a debate relating to the seminar title. Three hours later the argument remained on the title page. One of his colleagues comments, "Vic was always approachable, supportive and encouraging. He didn't just teach orthodontics, but instilled in his students a love and enthusiasm of the discipline as well as the importance of questioning."

At 81 years of age, Dr. West died on July 31, 2010, after an extended illness, ending a commendable career and leaving behind a family to whom he was devoted: his wife, Denise; three daughters—Shana, Prani, and Tamsin—and their families.

Roy C. Wilkin Jr.

Roy Wilkin Jr., SD'62, pursued an active life. Born in Portsmouth, Virginia, on May 24, 1925, he attended Ozark Academy in Arkansas, where he met his wife Mary. Thereafter he served more than five years in the United



Dr. Roy Wilkin

States Navy on the USS *Rebel* and USS *Hope* in the Pacific arena during World War II.

He attended Madison College in Tennessee and Pacific Union College in Angwin, California, completing a laboratory technician's course that supported his subsequent education.

Moving to Loma Linda, he graduated with the LLUSD class of 1962.

He would establish an extensive dental practice in Edmonton, Alberta (1962-1973), where he and his wife Mary, both airplane pilots, also established a flying school and where he completed an orthodontics residency in 1965.

Moving to Blythe, California, he combined an active dental practice there with twice monthly flights to Palmdale, California, to treat orthodontic patients.

When he developed macular degeneration, Dr. Wilkin, then 77 years old, retired, moving to Bakersfield to be with family members until his death on June 26, 2010.

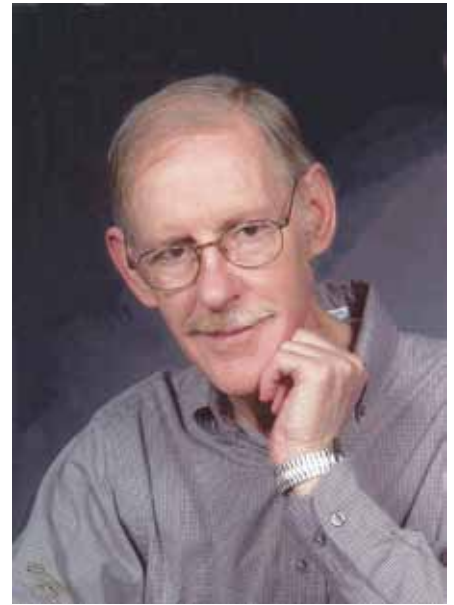
Dr. Wilkin's son Mark preceded him in death (1982). Survivors include the mother of his children, Mary; two sons, Joseph and Steve (wife Cindy) of Bakersfield; a daughter, Judy, of St. George, Utah; and seven grandchildren.

William Allan Woods

Despite his failing health, **William Woods**, SD'70, attended the 40th reunion of his dental class just 16 months before he died in Chico, California (June 22, 2011).

From the age of ten, Dr. Woods, who was born in Takoma Park, Maryland (May 21, 1942) always had a job—first a paper route, then various jobs as a teenager at Washington Adventist Hospital. He became adept at roofing and stocking grocery shelves.

Always diligently planning for the future, Dr. Woods chose medical technology as his college major at Columbia Union College, where he graduated in 1964.



Dr. William Woods

After working as a medical technologist at Washington Adventist Hospital in Takoma Park for two years, Dr. Woods and his wife, Betty Jane, moved to Loma Linda, where he joined the dental class of 1970. Thereafter, while teaching oral medicine and completing a residency in oral surgery (1974), Dr. Woods saw repeated cases of accident victims with broken jaws and worse. The experience prompted him to sell all three of his motorcycles. However, he never lost his passion for vehicles. When he moved to Ukiah to begin a 22-year practice, he put in a second garage door to accommodate his cars—all to be rebuilt by his own skills.

A dental classmate characterizes Dr. Woods as "careful in everything he did. . . . His exemplary character truly represented his God, his family, and the dental profession to the highest caliber."

A co-worker says, "He had strong convictions and a straight and moral compass."

A friend recalls times spent discussing cars with Dr. Woods, adding, "He was a great car guy. He researched everything he bought, and kept impeccable records. Those same qualities in his professional life established his unsurpassed reputation as an oral surgeon."

Mourning the death of Dr. Woods are his wife, Betty of Chico, California; children, Kristi Ayars of Chico, and Michael of Santa Monica; and two grandchildren.

It goes without saying that you're a pro with a half Hollenback carver,



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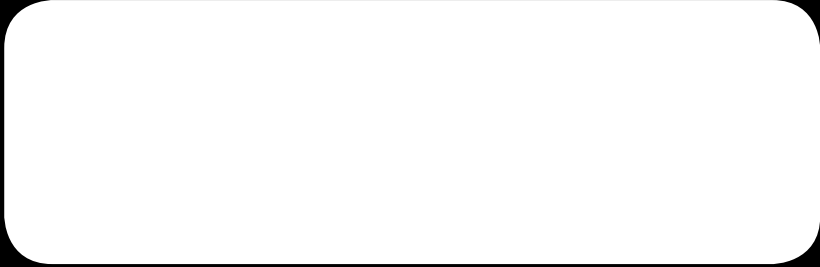


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