

# DIAMOND

Maurice H. Kornberg School of Dentistry Magazine | Fall 2013

Beginning a **New Era**  
at **Temple Dental**  
THE NEXT 150 YEARS



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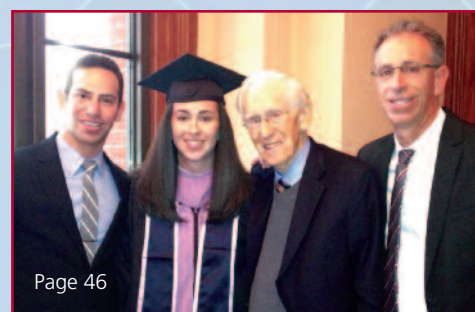
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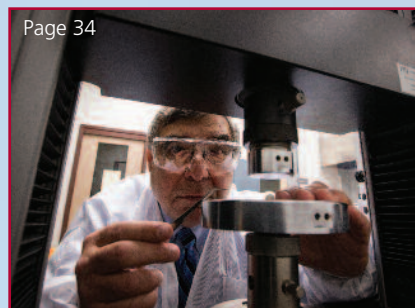
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The Next  
**150** years

**O**ver the last 150 years, the Philadelphia Dental College, the Temple University School of Dentistry and now the Maurice H. Kornberg School of Dentistry have experienced, undergone, suffered, and exuberantly witnessed wars, tragedies, triumphs, economic developments, emergence of new economies and the disappearance of countries and cultures. In all of these events, our dental school has continued to educate dentists (and for several decades, dental hygienists) every year. The school thrived in perhaps the best 150 years in human history, especially for the United States. I can only contemplate what we see today, for predicting what will happen in the future is beyond the bandwidth of any human. We cannot envision that far but we can plant seeds that will help those who follow us.

In this issue of *Diamond*, two prominent dental leaders share their predictions for our profession from the perspectives of academia, private practice, and policy. They are well known nationally and to our alumni. One shares his cautious pessimism about the future of the profession, while the other is excited about the future. I can attest to you without hesitation that in the year 2280 their predictions will be proven wrong because the future cannot be predicted with the limited information we currently have.

Today we face major challenges in dental education. Institutions face a high level of competition for faculty who are clinically proficient in all aspects of general dentistry. This situation was not caused by recent decisions, but by decades of shifts in funding for higher education to students, growth in the income of dentists (which is wonderful), and misguided funding strategies that shifted research, and hence training funds, away from dental schools to medical and other schools in universities. Our current system of dental and higher education in the U.S. operates in individual islands that address local markets or segments of markets. The opening of for-profit dental schools in osteopathic medical schools which, like the majority of other dental schools, are focused on clinical education and on meeting the basic standards for accreditation, are threats that will haunt the status of our profession, and hereafter, our dental school over the next decade.

We have prepared, and are preparing, ourselves for this new world. After five years of planning and execution of critical decisions to increase the funding base for the school and renovating our facilities, we are now competing for the best students who are choosing our dental school even when they are



*Amid I. Ismail  
Dean and Laura H.  
Carnell Professor  
BDS, MPH, MBA, DrPH,  
Diplomate ABDPH*

*“Today we face major challenges in dental education. Institutions face a high level of competition for faculty who are clinically proficient in all aspects of general dentistry.”*

— Dean Amid I. Ismail

*“We are building and will continue to build our research capacity in areas that have direct impact on oral health and future management of dental and oral diseases. These changes did not happen because of administrative fiat but rather through the careful strategic positioning of the school built on the support of students, staff, faculty and alumni.”*

— Dean Amid I. Ismail

given the choice to attend various other schools. Our average grade point average (GPA) and Dental Aptitude Test (DAT) scores are now above the national average. Our clinics are evolving to become care centers where more and more patients will seek care and, hence, provide our students with opportunities to graduate with excellent

clinical skills. We are building and will continue to build our research capacity in areas that have direct impact on oral health and future management of dental and oral diseases. These changes did not happen because of administrative fiat but rather through the careful strategic positioning of the school built on the support of students, staff, faculty and alumni.

Positive change does not just happen, it is created by individuals, groups, other leaders or nature. Finding those leaders who will build the future to become better than today is the main challenge for our country, states, cities and school. The future will not be shaped by managers who do excellent daily tasks but by those who can envision the future, select the right targets at the precise time, and convince others to lead the way to reach these targets. Selecting the right target is the core competence of leadership.

Temple University dental school is at that precise moment in its long history to move on a path to reach its destiny. We will remain a center for excellence in clinical care and education of dentists for the 22nd century that is not only based on developing advanced clinical skills but on science and, most importantly, professional ethical standards. Please join me in helping us achieve this target; become a leader and steward of the future of this boundless dental school.

## “It All Depends on You!”



**Michael C. Alfano, DMD, PhD**  
Professor & Senior Presidential Fellow  
Executive Vice President Emeritus  
New York University

In the joyful spirit of the 150th Anniversary of the founding of the Kornberg School of Dentistry at Temple University, this article should strike an appropriately high-minded, upbeat tone to match the occasion. Indeed, on several past occasions I have had the wonderful opportunity to speculate about the amazing advances that science and engineering will bring to an ever brighter future for the dental profession. However, on this occasion, Dean Ismail asked for a “pull-no-punches” assessment of where the profession seems likely to be headed, so here is my take on what the dental profession may look like in a couple of decades, especially if dentistry in the United States continues to be dominated by the bastions of the status quo such as the ADA House of Delegates, among others. That said, let me quickly point out that these are my views, not those of Dean Ismail.

**M**y pessimism about the future of dentistry is driven by the profession's continuing resistance to changes in the delivery model for dental services. Such resistance is certainly not a new phenomenon. In 1910, the dentists in Ohio successfully campaigned to close the very first school of dental hygiene on the basis that the graduates would not be as well qualified to perform hygiene services as dentists. Yet, if we fast-forward to the beginning of the 21st century, there are now hundreds of dental hygiene educational programs and ALL parties are well served by the birth of the dental hygiene profession. The public can receive important services from hygienists at fees that are lower than what they would be if provided by a dentist; the dentist is well served by being able to focus his/her time on more complex procedures with associated increased fulfillment and enhanced practice revenue; and dental hygienists themselves are well served by the opportunities for meaningful careers in healthcare. Thus, the reader should be wary that repression of new ideas in support of the status quo with its established dental practice revenue models often masquerades as a genuine concern for the well-being of the public. Indeed, not every new idea for change in healthcare delivery is worthy of implementation. Yet, any thoughtful layperson can see through a thinly veneered rhetoric about quality of care to recognize that the perceived economic interests of the dental profession are also driving recalcitrance to change.

History repeats itself. In my 40-plus-year career, I have seen substantial initial resistance by the profession to such reforms as expanded-function dental assistants, routine glove wearing, Medicare, and mercury hygiene, among many others. The newest wave of resistance has been launched in opposition to the efforts in several states to approve a type of oral health-care practitioner commonly known as either a mid-level practitioner or a dental therapist. Two states now allow such practitioners—Alaska and Minnesota—and several others are considering the approval of such practitioners, but 'organized

dentistry' always mounts strong opposition. The current position on mid-levels is particularly worrisome because organized dentistry is not only opposed to the licensure of such practitioners, it is opposed even to the study of how such professionals might serve the public and enhance dental practice. I therefore submit that this extreme position of not wanting to know if such mid-level providers can be helpful or not is no longer simply supporting the status quo, it is an anti-intellectual position unworthy of a science-based profession that rose to university status more than a century ago. Moreover, unlike the past examples listed above wherein the profession eventually reversed itself, today's 'status quotians' could be placing the profession on the precipice of a decline that may not be reversible, as I will explain later.

By now you must be thinking that I am firmly ensconced in the belief that the creation of a mid-level practitioner in oral health will be both the answer to the access-to-oral-care problem and a successful vector in mitigating the rise in oral health-care costs in the country. Not true. While I believe the large database from other countries, and the early results from both Alaska and Minnesota, demonstrates clearly that mid-levels can safely deliver high quality oral health services, I do not know if the trilevel U.S. payment system—a combination of self-pay, private insurance and public programs—will support such a provider model adequately. Also, I do not know if the creation of such a new type of practitioner will result in the deployment of these practitioners in a manner that will increase access to care. Moreover, neither Alaska

*“Thus, the reader should be wary that repression of new ideas in support of the status quo with its established dental practice revenue models often masquerades as a genuine concern for the well-being of the public.”*

— Michael C. Alfano

nor Minnesota constitutes an ideal place to study these unknowns. In the case of Alaska, the dental therapists are deployed primarily in remote villages with the partial economic support of Native American tribes. In contrast, while the Minnesota model can be evaluated in the more traditional tri-payer system, the level of training for a mid-level dental practitioner in that state can be as long as six years, thereby creating a health practitioner with the number of years in training, and presumably compensation, approaching that of a dentist. As more states wrestle this matter to a conclusion, we are at risk of creating an oral care delivery model that will vary by state, type of mid-level training required, disparate scopes of practice, and variable to no supervision, including the establishment of mid-level oral care offices with absolutely no linkages to a dentist, the most dangerous outcome of all.

I submit to you that this is the course we are on over the next 20 years. I predict that the anti-intellectual forces will prevail in some states, not others. I foresee a future whereby no one is well served. The public will become confused about what services are available from a dental therapist vs. a dentist vs. a dental hygienist. Dental therapists will practice with the moral hazard that they might be inclined to fit a patient who is best treated by four implants and an overdenture, with a full non-implant supported denture simply because they might be licensed to make a denture but not to place an implant. Amidst this confusion, the esteem of the dental profession will surely decline as many patients in need of 'routine' care will migrate to the dental therapist who will likely charge lower fees for comparable services. Such patients may never avail themselves of the diagnostic acumen or complete range of services offered by a dentist because they habitually seek care from a dental therapist. Ultimately, this scatter-shot 'system' of dental care will create biases and broken trusts from which there can be no recovery.

Instead of fighting every effort to explore the potential of adding a new type of dental practitioner

to the oral health team, the dental profession should be allowing this evaluation to occur, and if it turns out that mid-levels can make valuable contributions in the United States, the pro-

profession should embrace their licensure and work to ensure that the professionals are linked to the rest of the oral care team and deployed in ways which enhance the access to care and oral health of the public. In this manner, much like the lesson learned from dental hygiene more than 100 years ago, the public will be well served with more access at lower costs and the profession will continue to grow in esteem and to prosper economically.

To paraphrase a former dean of the Harvard School of Dental Medicine:

"Dentists are the most over-educated professionals for what they do, and they are the most under-trained for what they should be doing."

Perhaps the dental alumni of the distinguished school of dentistry at Temple University can commit to begin to change this. Perhaps they can begin to acknowledge that their best value to society is in accurately diagnosing the many oral diseases and oral manifestations of systemic disease, treatment planning complex patient needs with the most appropriate services available, performing complex surgical services, managing collapsed occlusions, using pharmacotherapy prudently, and supervising a first-rate team of colleagues, each with high skills in more narrow aspects of oral care. Perhaps the future of the profession can be bright, but it all depends on you!

*"The public will be well served with more access at lower costs and the profession will continue to grow in esteem and to prosper economically."*

— Michael C. Alfano



WHERE ARE WE GOING IN DENTISTRY?



**Howard Bailit, DMD, PhD**

Professor Emeritus  
University of Connecticut

This paper examines trends that are likely to drive changes in dental education and practice and determine the future of the profession. The major drivers of change are the prevalence of oral diseases, innovations in science and technology, and market forces. The paper focuses on shorter-term issues (e.g., 10 to 20 years). The long-term future of the profession depends on how these issues are resolved.

# Trends

## Oral Disease

The United States and many other developed countries are experiencing major improvements in oral health. As a result of community water fluoridation, preventive services provided by dentists (e.g., sealants), and better personal preventive behaviors, there has been a dramatic decline in the incidence of caries and the prevalence of untreated dental decay. This trend has affected all income and education groups and is certain to continue. Older cohorts (e.g., above 65 years of age) who did not have the full benefits of fluoride are declining in numbers. Younger cohorts have much less disease.

Not only is the population getting healthier, but most untreated disease is concentrated in lower income groups. This is not because the incidence of caries is that much higher in this segment of

the population. Rather, it is the result of large disparities in financial access to care. The fact is that the lower income population (ca. 100 million people) has the highest prevalence of untreated tooth decay but accounts for less than 20 percent of dental expenditures. In contrast, people in the upper third of the income distribution have relatively little untreated disease but account for 53 percent of expenditures. In other words, the population that has the resources to pay for dental services is in excellent oral health. The population that has most untreated disease cannot afford to pay for private sector dental services, and public programs for the poor have significant limitations (i.e., Medicaid, safety net clinics). These trends have major implications for private dental practice. Namely, the effective demand for restorative care, the financial mainstay of most general practices, is declining. In 1959, 42 percent of general practitioner (GP) services were restorations and in

2005, 12 percent. In the future, restorations are likely to account for an even smaller percentage of GP dental services.

While there are other oral diseases that require treatment, and more elderly are dentate and visiting dentists, these are not substitutes for fewer restorations. As restorative care declines, dentists are becoming more dependent financially on diagnostic and preventive services. Prosthetics and specialty services remain a relatively small and declining component of the average general dental practice.

It is important to recognize that the current dental education and delivery systems were organized to provide care to a population where tooth decay was rampant. This is no longer the case, and the trends are clear—less tooth decay and especially among upper income groups. This raises a basic question: How many dentists are needed in the future to meet the

effective demand (in contrast to need) for dental care?

### Science and Technology

No one person can predict the scientific developments in each major area of biomedical research that will impact the future practice of dentistry. It is possible to make some general predictions. First, the billions of dollars spent each year on biomedical and technology research by governments and private industry in developed countries will lead to more effective diagnostic, preventive and treatment methods. This will result in new and improved community and practice level preventive methods that will further reduce the incidence of caries and periodontal disease. More treatments will be available that do not require doctoral level training and

can be delegated to auxiliary personnel (e.g., Atraumatic Restorative Treatment). At the same time, some new treatments will require advanced scientific training (e.g., stem cell-derived tooth transplants).

Second, research on basic disease processes will result in the closer integration of dental and medical care. The relationship between periodontal disease and a host of systemic medical conditions has received a great deal of attention (e.g., type II diabetes). Less well known is the impact of medical treatments on oral physiology (e.g., salivary flow) and diseases (e.g., xerostomia and caries). This is a growing problem as the population ages and takes more medications. Finally, it is likely that some new therapies to prevent

and treat oral diseases will involve the use of medications that have systemic side effects. Thus, both dentists and physicians will need to have a greater appreciation and understanding of the basic pathophysiology and treatment of conditions that have both oral and systemic manifestations. Overall, advances in biomedical and technology research will lead to significant further improvements in oral health. Dentists will need a greater understanding of human biology and the clinical (dental and medical) sciences to use these advanced therapies and to interact effectively with other health professionals.

### Delivery System

The dental care delivery system evolved over the past 200 years in response to local market forces.





While these market forces are never static, they are now in a period of relatively rapid change. This review examines one important area of change, the formation of group practices.

Until recently, the dominant practice model was independent solo dentists. Ten years ago, they represented almost 85 percent of private practicing dentists. Solo practices dominated, because they were able to deliver care just as efficiently as group practices. Over the past 20 years, solo practices did increase in size (i.e., operatories, staff and equipment). In part, this resulted from healthier patients who primarily needed diagnostic and preventive services which, in large part, were delegated to dental hygienists. Dentists also employed more dental

assistants and administrative staff to increase practice efficiency. Now, the number of group practices is increasing and solo practices decreasing. The reasons for this change are not fully understood but are probably related to practice efficiencies related to larger size. Examples include increases in the size and complexity of practice staff, greater use of expensive technology, and better access to the capital needed to construct, equip and operate dental offices. Another group practice advantage is the availability of more dental graduates who have substantial educational debt and are unable to purchase their own practices.

Many groups are made up of about five offices with two to five dentists per office. At this time,

there are not many practices with 20 or more dentists in the same location. Likewise, most group practices are not part of larger integrated medical care systems. It is still unclear who owns these new group practices: dentists, corporations or others.

In 10 years, group practices will become a significant component of the dental delivery system in many markets, and they will employ thousands of dentists. This is a major change from the current dental care system, but it is essentially the same delivery model that now exists in medicine.

As these groups begin to exert their influence at the local market level, they are likely to come into conflict with solo practitioners. This is because of different finan-

cial incentives. For example, group practices are much better positioned to gain from the employment of dental therapists than solo dentists. Likewise, group practice companies will want larger organizations to buy them and may advocate for changes in dental practice acts to permit non-dentist ownership of dental practices.

It is also reasonable to predict that some group practices will try to contract directly with employers to deliver care to employees and dependents. This will put them in competition with insurers. A major unresolved issue is the interest of large medical care systems (e.g., Accountable Care Organizations) in owning and operating dental practices. To date, this does not appear to be the case, but it is too early to predict how medical care systems will develop vis-à-vis dentistry.

### **Implications**

So, what impact will the changes just described in oral health, the biomedical sciences, and market forces have on dental education and practice? It is perilous to make predictions, because many changes will take place over the next 25 or more years that cannot be predicted. With this in mind, here are few cautious remarks:

### **Dental Education**

Dental schools are facing major challenges because public support is declining and educational debt may soon reach unsustainable levels. At the same time, the number

of schools and graduates is increasing rapidly, but the demand for dental care is decreasing. Other professions, such as law and veterinary medicine have recently faced similar challenges, and they experienced dramatic declines in applicants. This may well occur in dentistry, as dental graduates find it increasingly difficult to pay back hundreds of thousands of dollars in educational debt.

If this does happen, will most dental schools survive by downsizing and operating more efficiently or will many be forced to close? Unfortunately, based on a similar supply and demand imbalance in the 1980s, the latter outcome is most likely. This will be a difficult period for the dental education community, and it will lead to some basic questions being asked:

- How many dentists are needed to provide care to an increasingly healthy population? While it is true that a large percentage of the American people do not have adequate access to dental care, this is not because there are too few dentists. The access problem will not be solved until American taxpayers decide to provide the poor adequate public dental insurance.
- What is the appropriate level of dental school training in the biomedical and clinical dental and medical sciences? Research in the biomedical sciences will produce new therapies that require a strong science background, and more patients will

have related oral and systemic diseases.

- Should graduates be required to spend another two or three years in residency training, so they are well trained to provide most dental services and to work efficiently with a full array of clinical and administrative staff and advanced technology?
- Should the education of dentists and physicians be more closely integrated? Clearly, it is going to be very difficult to operate small dental schools efficiently and still provide students a high-quality education. Closer integration with medical schools may offer major operating efficiencies.
- Is dentistry a learned profession (e.g., law, medicine) or a doctoral level technical occupation (e.g., optometry)? If the former, the education of dentists must be based in research-intensive universities, and dental schools have to provide faculty the time and resources necessary to compete successfully for research grants and generate new knowledge.

### **Practice**

Dentists also face serious challenges. At the national level dental utilization rates and per person expenditures began to decline five years before the 2007/08 economic recession, and these declines are reflected in lower practitioner incomes. At the same time, dentists are faced with a rapid increase in the supply of dental services, resulting from more graduates and the greater use of auxiliaries.

How will the majority of dentists who are still in solo practices respond to these challenges?

- Similar to physicians in the 1990s, will they form Independent Practice Associations to compete with large dental group practices and to increase their negotiating leverage with purchasers?
- Will many solo dentists decide to form or join group practices? The past 20 years have seen the virtual collapse of solo medical practice; the majority of physicians are now in some form of group practice.
- Will some dentists see advantages in becoming part of large medical care organizations? Of course, this depends on hospitals and medical group practices making a decision to offer dental services.

In all likelihood, all these options will be pursued, as dentists respond to different local market supply and demand challenges.

### Long Term

It is too early to judge how the challenges faced by the profession will be resolved. If the right decisions are made in the next several years, the long-term future (e.g., 20 or more years) is bright. This is because most Americans value and want more dental services. National norms of good dental health are high, and all people want a functional and esthetic dentition. Americans also have empathy for the less fortunate, so in time public resources will be available to provide the underserved financial access to

basic dental services. What all this means is that there is a strong underlying demand for dental care, if it is affordable.

At the same time the practice of dentistry has the opportunity to evolve into a medical discipline with a firm foundation in the biomedical and clinical sciences. Research is providing dentists in public health and clinical practice more evidenced-based methods to improve oral health by community prevention programs and personnel preventive and curative services, respectively. These advances will make dentistry an even more satisfying and rewarding career.

### Conclusions

This review suggests that the dental education community and practitioners face some difficult years ahead, but the long-term future is very promising. Yet, the challenges now facing the profession are real and must be addressed. Indeed, the real danger is to assume that there are no problems, and that the status quo will continue into the foreseeable future. This is clearly not the case.

What dentistry needs are leaders who will come together and address these problems, realizing that they are contentious and likely to lead to conflict among people of "good will." They need to take a long-range perspective of what is best for the American people and the profession. They need to convince a disparate group of dental educators and practitioners to come together and pull in the same direction. They need to convince the profession and the public that this is the time to make fundamental improvements in the current system for educating the dental workforce and delivering care to the population.

While the times are challenging, this is also a period of opportunity and optimism. This idea is captured in the famous quote from President John F. Kennedy.

"When written in Chinese, the word 'crisis' is composed of two characters. One represents danger and the other represents opportunity."

## 危機

*"When written in Chinese, the word 'crisis' is composed of two characters. One represents danger and the other represents opportunity."*

— President John F. Kennedy

# New comprehensive care clinics



**A**lexander Fuller, a fourth-year dental student at the Kornberg School of Dentistry, had had enough walking. Every day he'd hustle from appointment to appointment, up and down flights of stairs and through the school's long corridors and back again, to earn his requirements for graduation. One day, his curiosity got the better of him.

"I actually wore a pedometer to see how much running around I did," Fuller says. "It came to be almost five miles, and that wasn't even a full day."

But things have changed for Fuller and his fellow students, after the school transitioned from a department-based model to comprehensive clinics last spring. It was a fundamental reorganization of Kornberg's clinics—pegged by ranking faculty members as a modernization of the school—that grouped all of the junior and senior graduate students into one of four "clusters" during their final two years.

Now, Fuller reports to not only the same clinic each day he's at the school, but the same exact chair. He can perform most procedures on the spot, including those that incorporate fixed prosthodontics, removable prosthetics and limited endodontics, instead of running from department to department. His patients know where to find him, and he works closely with the faculty assigned to his cluster, as well as administrators who help with scheduling and paperwork.

"It's much more efficient," Fuller says. "All the materials I need are somewhat close; I don't have to run up and down floors, between different faculties, and all of that. Those were big time wasters."

That's an encouraging review for Kornberg faculty, who forged ahead with the change in May after approximately five years of planning. The transition comes at the tail end of a trend across the academic world, which saw most universities adopt a comprehensive



model sometime over the past several decades. However, Kornberg's hesitancy to switch has turned out to be an advantage.

"We were able to learn from other schools, and other models, and take the best of them all to put together in our model," says Hana Hasson, DDS, MS, an associate professor and director of cluster 2B. "For example, other schools have organized their models in such a way that a faculty member stays with their students through two years of clinical practice. So that limits student exposure to different practices and abilities."

In Kornberg's model, students are assigned to either cluster 1, 2A, 2B, or 3, named for the floor on which they reside. Each cluster is overseen by a cluster director, or leader, who is responsible for the progress of about 40 students and directly interacts with the cluster's senior students. The directors are assisted by a faculty mentor, who oversees all of the third-year students in the cluster, and also a team of five or six faculty row instructors, an administrator known as a clinical coordinator, and a secretary.

"It's one big group practice, and very realistic," says John Friel, DDS, assistant professor and director of cluster 3. "We have a receptionist that makes and confirms appointments, and a businessperson that takes credit cards and payments and deals with pre-

authorizations. I think that it's a big plus for the students, and they're learning real-world dentistry, where they're not just focused on one department but the total patient care package."

For their part, students seem to agree that the cluster model cuts down on headaches. Many fourth-year students, who saw both models during their clinical care experience, say the new system reduces the limitations of quirky computer systems and paperwork while improving the patient experience.

"In the old system, it was a battle to get chairs every morning at 8 a.m.," says Mary Grace Rizzo, a fourth-year student in cluster 1. "I'd log into a computer system and try and find an opening in the section I needed, and it wasn't necessarily fair because it was just whoever clicked the fastest. Now I don't worry about that, I know I have a chair on certain days."

Michael Saba, a student in cluster 3, says this sometimes chaotic system would often affect patient relationships.

"If you couldn't get a chair to see a patient, they often wouldn't believe that there wasn't room for them in a dental facility," Saba says. "Then they'd walk in that day and see half the chairs not being used, because a student would book a chair just to have it."

Now, each chair is shared between two students, with seniors taking Monday, Wednesday and Friday mornings, and juniors taking Tuesday, Thursday and Friday afternoons. In addition to resolving the fight for chairs, students also say the cluster's coordinators and other administrators help to cut back on how much paperwork they handle.

"We're a bit like a den mother," says Rosalind Neal, who oversees the daily ins and outs as coordinator of cluster 2A. "Basically, we make sure that operations are running smoothly, and act as liaison between the patients, students and faculty."

For all the positives of the new system, there are a few points of concern for students and faculty. Chief among them is the fact that students will see fewer faculty members, and therefore schools of thought, over their two years of providing clinical care.

“The cluster system streamlines things a lot more, but I also don’t mind seeing other faculty perspectives on how to do things,” says Colin Rice, a fourth-year student in cluster 1. “Since the cluster is a set faculty group, we don’t always get to experience the other philosophies or certain faculty members who know [procedures] to do things more quickly.”

However, while some students no longer have the option to pursue chairs with professors of their choice, faculty members say the more personal relationships that result from the cluster system can also have positive effects.

“From a mentorship standpoint, you may only get to know a small group of students well, but then they open up to you,” says Gene Whitaker, DMD, PhD, associate professor and mentor. “If they get to trusting you, they may share what their problems and weaknesses are, and that’s what we want them to do. If they have an issue, they’re now comfortable discussing it.”

Mentor and associate professor Mark Meraner, DDS, says that more interpersonal advising is a goal the school has had for years.

“I’ve been here 33 years, and in that period of time [the school] has tried to develop some sort of advising system where full-time faculty would be assigned a certain number of students and do the kinds of things mentors are supposed to do now,” Meraner says. “But it would come and go and never really became consistent. There was always a perceived need to do this.”

Another positive of more closely monitoring students is ensuring that some don’t get lost in the shuffle or miss requirements. Mandatory attendance was also instituted—something that caused groans among some students but will benefit their experience in the long run, faculty members say.

“When we started, some students were trying to avoid the front desk or just go around the corner because they’d always done it that way,” Hassan says. “Really, it’s about the change of looking at a patient not as a requirement, but in the sense of providing total care.”

At the end of the day, students and faculty know that the most important thing isn’t the number of footsteps they take, or the amount of papers they fill out, or the battling over chairs. Instead, it’s two primary questions: Did the patient get the best quality care, and did the student get the best possible education?

Time will tell just how much positive impact the switch to a cluster system will have, but faculty and students alike are optimistic that it will only further improve the quality reputation of Kornberg’s services and graduates.

“There’s always resistance to change, especially when you already have large group practice associations coming in and hiring Temple students because they have great experience right off the block,” Friel says. “But we just felt we could make it better, and I think we have.”

Despite the fact that Fuller’s clinical rounds no longer double as his daily exercise, the soon-to-be graduate agrees that the experience is better for students and patients alike.

“We don’t have to reintroduce a patient to different faculty in different rooms and waste time explaining what’s going on over and over. Instead, we get right to it,” Fuller says. “We can do more and focus on care instead of paperwork. It’s interacting with a human being instead of a paper trail.”







during the spring 2013 semester to begin planning.

The E-Campus platform utilizes technology powered by healthcare-learning.com. This UK-based company specializes in providing interactive teaching and online courses for healthcare professionals. The advisory committee worked closely with the company to prepare the platform for the Temple dental community.

This new undertaking will elevate Kornberg Dental to new heights in the dental world. While online courses are fairly standard across much of academia, few dental schools offer online CE courses because of the hands-on nature of dentistry.

The first course to be offered on the E-Campus platform will be the “Dental Implantology” certificate course. Offered completely online, the course will feature material from seven Kornberg Dental professors.

“The reason we chose to offer this specific course first is because it’s Kornberg Dental’s largest and most popular certificate course,” explains Dr. Badi.

One feature that will certainly differentiate Temple’s E-Campus initiative from anything that has been done in online dental education before is the platform’s E-Portfolio feature. In addition to serving as a

resource for professionals, the E-Portfolio feature will support what students are learning in the classroom by allowing them the chance to collect case studies interactively at a learn-as-they-progress pace.

“We’re considering requiring students to have at least one E-Portfolio throughout their time at Kornberg Dental,” says Dr. Badi. “Creating an E-Portfolio will help students with critical thinking and interdisciplinary skills.” Dr. Badi said he is unaware of any other dental school offering an E-Portfolio to students.

Perhaps the most exciting part about the E-Campus initiative is that it will not just benefit Temple students and alumni, but will be open to students and professionals nationally, and in the future, internationally.

For years, Kornberg Dental has offered successful continuing education courses on campus, often requiring professionals to commit to traveling to Philadelphia for two to three days to earn credits. Now, Kornberg Dental alumni, along with other dental professionals, including dentists, specialists, assistants and hygienists, will have the opportunity to learn from Temple’s first-class faculty at their own pace, from the comfort of their own homes and offices.

In the future, Dr. Badi hopes the online platform will utilize more online tools, including blogs, to make learning more interactive and fun. Students will be able to learn at their own pace, take breaks and utilize all kinds of online tools.

“Apart from the E-Campus platform being convenient and flexible, it enables Temple to share its dental knowledge and expertise with the world,” says Dr. Badi.

Other future plans involve opening up the E-Campus platform to the world—including translating the materials to prevent language barrier issues. Dr. Badi suspects the first language the platform would likely be translated to is Chinese.

As the platform begins to grow and become a fixture at Kornberg Dental, Dr. Badi expects that the University will allow outside dental experts to share their knowledge through the platform. Temple aims to be the thought leader behind this new technology that will benefit dental professionals for years to come.

“Dentistry is such a hands-on profession,” explains Dr. Badi. “While we understand the importance of keeping our program hands-on, we also want to adapt to the world we live in by helping future dental professionals learn in the ways that suit them best.”

## MAKING THE IMPOSSIBLE, POSSIBLE



Before (left) and after: Nothing is the same in this largest simulation lab in the country.

It's May 24, 2013, and the entire preclinical lab for general dentistry has been fully demolished. The timeline was just two weeks, but an even tighter deadline lies ahead. In three months, an entirely new lab must be ready for incoming students.

To accomplish this feat, two shifts of 18 men each will essentially work around the clock for the first month. Then as certain plateaus are reached, the team of tradesmen will be scaled back accordingly.

All utilities will be relocated the only way that makes sense: in the ceiling of the clinic below. Plumbers alone will put in 1,000 feet of piping—without impacting operations.

### Monumental Constraints

"That was the goal," says Theo DeSanto, Temple's senior project manager, facilities management, as he reflects on the undertaking. "That was why we worked at night."

The constraints were obviously monumental: use of an existing space, a short time period and a tight budget. "It was more difficult than building a house with three levels," says Dean Ismail, who admits he was prepared for construction to be completed one to two weeks late. "But Theo is the person who made it happen," he emphasizes, with a nod of agreement from Dr. Dan Boston, associate dean for clinical comprehensive care who helped coordinate the project.

A centerpiece of the renovation is certainly the simulator. No longer a head on a stick as in the previous lab, the simulator is a patient torso and "exactly like seeing a real patient," says Dr. Boston. "It's the latest model from a manufacturer who makes dental operating equipment. You can develop ways of working, get the proper approach and not learn bad habits." Helping also with the true-to-life environment are the instruments. They're legitimate ones, identical to what's in the school's general sterilized system.

Such thoughtful planning marks each element of the design. Nothing is the same as it was. Aisles are wider for ease of movement. Benches are lower with no cabinets above to impede sightlines and student interaction. Internet and intranet capability, monitors that can show live video and documents from the instructor station and hookups for guest lecturers' laptops enable use of the most current technology. Portable and standing microphones allow instructors to move around and engage students. Electric, suction, natural, water, compressed air, an active filtering system for fumes and an AV system are all squeezed into customized stations that make use of every square inch.

Overall, the look is inviting and comfortable. Rather than one large room, two smaller ones, mirror images with 71 stations each, create a friendlier space. In the middle is a lab enclosed with lots of glass. At the entrance is a display case with large replicas of dental instruments and a skylight that captures light for the instructor station. Graphic blocks of color, actually doors on locked instrument cabinets, fill two ends of the room. Still to come is artwork that will add interest to the walls.

Also to come is a digital lab with milling stations for crowns, prostheses and other restorations. With all the infrastructure in place, work will begin in about six months. It will be the last step in a renovation that features the largest simulation lab in the country.

### **Blazing Some Trails**

Financing for the project came, in part, from the university. "The Dental School is paying off a five-year, \$4 million loan from Temple," says Dean Ismail. Ken Kaiser, Temple's interim chief financial officer and treasurer, describes his reaction to the request. "We were happy to partner with the dental school and the dean. It's a worthwhile project, and it's the right thing to do for the students. The dean had great ideas and was creative. He didn't just ask for a handout. He's using his own resources, too. It's been



*Week of June 3, 2013*



*Workstations looking south, July 26, 2013*



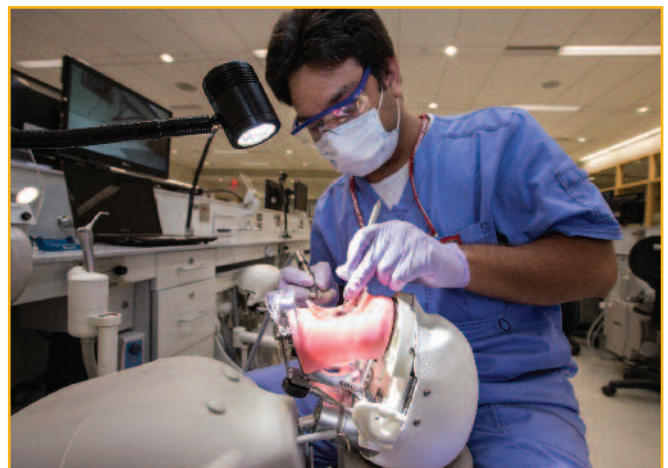
*Row A close-up, August 7, 2013*

used as a model, jump-starting deals with other deans for new programs or renovations. He's blazing some trails."

At a time when Temple is changing its budget model, Kaiser is particularly pleased that Dean Ismail is thinking entrepreneurially. "Our new budget is based on revenues rather than expenses, and the dean is generating new revenues. So the more revenue he brings in, the more he can spend." Comments the dean: "Things do not just happen. They have to be made to happen."

Asked why he wanted to renovate now, Dean Ismail explains, "The lab was built in 1990. It was 23 years old and deteriorating. We couldn't get parts. Technology has advanced, and our students could see the difference. We're now providing students with the environment they deserve for excellence in clinical education and practice."

To reach that goal, planning began with input from a faculty committee. "We developed requirements before construction," says Dr. Boston. "Then we saw four designs before the dean and the faculty chose one." Providing coordination from the school side in





the initial stages through to completion, Dr. Boston met regularly with the architect, contractor and suppliers. "We were lucky that general contractor J.J. White stayed with us. He had worked on our other clinic renovations and knew the school and had the same workers. We also appreciate the quality work of architect Brian Ychysen from Bohlin Cywinski Jackson." But it's DeSanto who gets the highest praise. "I'm sad to see Theo leave," Dr. Boston remarks, recognizing that DeSanto needs to move on to other Temple projects. With a smile, DeSanto responds, "I'm very proud of this particular renovation. The level of detail and design in a short amount of time was quite a task."



# Goes Global

## THE KORNBERG SCHOOL OF DENTISTRY EXTENDS ITS MISSION INTERNATIONALLY

The school's students and faculty members gain first-hand knowledge of the global challenges in accessing oral health care as they provide treatment and education to adults and children. In addition, faculty travel internationally to teach, provide academic or professional consultation or conduct research with international colleagues.

The school recognizes that its graduates are entering a truly global profession. The school's vision encompasses both local and global perspectives and aims to contribute educational, research and service outreach that will make a positive difference right here in the community and beyond.

### **The Advanced Education in General Dentistry/Master of Science in Oral Biology (AEGD/MS)**

Kornberg School of Dentistry offers Kuwaiti residents a certificate program for both AEGD-1 and AEGD-2, a two-year overall AEGD program combined with either a Master's of Science or a Master's of Public Health degree. Additionally, the Kuwaiti residents are eligible to challenge the American Board of General Dentistry written and verbal examinations. This program, which began in the 2011-2012 academic year, was started to provide Kuwaiti dentists with training in more advanced dental procedures so they can be more versatile and provide outstanding quality care to their patients in Kuwait.



*Kuwaiti students gather for dinner for a night out with the dean and several faculty members.*

“Through this program, the students, faculty and staff learn about Kuwaiti culture and lifestyle,” explained Alessandro Bartoletti, DMD, director, AEGD Program. “Similarly, the Kuwaiti residents gain the invaluable experience of learning about our culture and lifestyle in addition to the advanced clinical training they receive.”

Following completion of the program, residents return to Kuwait to practice within the Ministry of Health system for three years. Once that time is complete, they will be able to either remain with the Ministry of Health or, should they so desire, enter private practice in Kuwait.



Participants from numerous countries traveled to London for the Global Collaboratory for Caries Management this past June.

### **The Global Collaboratory for Caries Management**

The purpose of the Global Collaboratory for Caries Management held in June in London was to complete protocols for the Practice and Education domains of ICDAS and ICCMS. ICDAS is a caries classification system that was started in collaboration with various countries across the globe to define and develop consensus on how best to preserve tooth structure through prevention of the initiation of tooth decay and the minimal removal of cavitated hard dental tissues. Dean Amid Ismail was one of the team leaders in the project. This conference was a follow-up on

the previous global caries management workshop which was held at Kornberg in 2011. A new protocol for caries management will help the school to implement a contemporary cariology and restorative care program.

“The conference helped promote oral health across the world as the protocols for caries classification and management will be standardized across the globe,” said Gayatri Malik, BDS, PhD, assistant professor, Pediatric Dentistry and Community Oral Health Sciences, who was selected to attend the conference. “The meeting was very beneficial as I got to interact with

renowned leading researchers and dental practitioners and share their thoughts on the current dental practice. We also got an opportunity to be a part of a group which is putting together various protocols in preventive dentistry, which is going to be the future of dental practice.”

He added that during the few months he has been at Kornberg, he has realized that the dean’s progressive ideas and collaboration with various countries on different aspects of clinical and research dentistry will help Kornberg to share and integrate ideas from all over the world. “This will help us in





*Bridge to Peace students attended a "white-out" Temple Men's basketball game during their stay. From left, Orit Markman, Batoul Abuassba, Areen Saleh Abdo, and Liat BenMoyal-Segal.*

providing our patients with state-of-the-art dental care."

Matthew Palermo, DDS, interim chair, Department of Restorative Dentistry, who also attended the conference, said "the various international programs provide Kornberg with an opportunity to share its knowledge with other countries, and also give us a perspective on issues they are facing. Education is needed in many regions of the world, and Kornberg is helping to close the knowledge gaps in these regions."

### **The Alliance for Oral Health Across Borders**

The Alliance for Oral Health Across Borders is an organization that currently includes over 40 dental schools, companies, foundations and individuals. The organization, of which Dean Ismail is chairman of the board, is focused on developing ambassadors to promote peace and understanding among dental students and faculty from diverse regions of the world that are in conflict. A major online and face-

to-face training program will be launched in December in New York. Program sites where members can collaborate and work together are being identified.

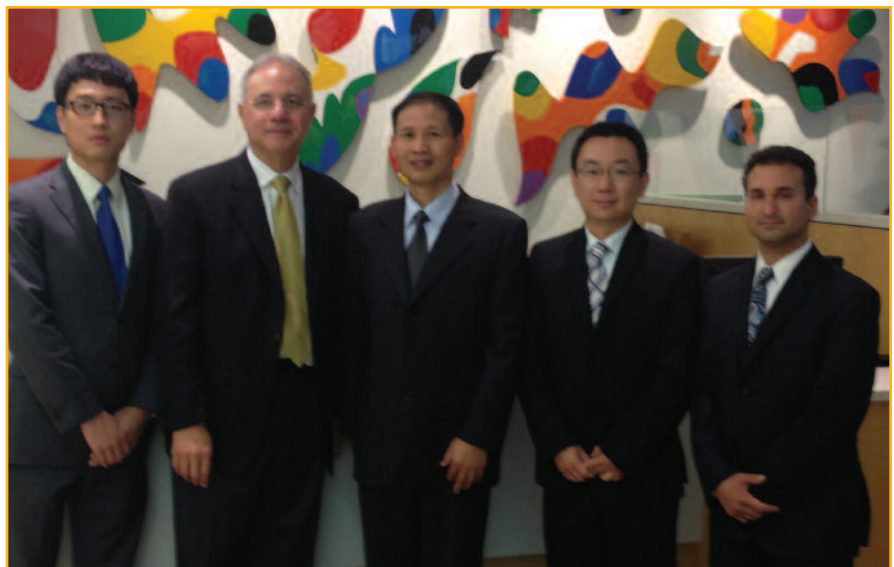
### **Topchoice**

Kornberg is negotiating with private dental groups in China to provide continuing dental education for dentists from that country working in private practice. It is expected that the first course will be offered in Philadelphia this December.

### **Bridge to Peace**

On July 10, Dean Ismail was a keynote speaker at an American, Israeli and Palestinian gathering of dentists and dental leaders in Jerusalem to celebrate the unveiling of the *Tree of Peace* at Al-Quds University. This new tree represents the fourth tree unveiled in the world. Allen Finkelstein, DDS, Class of 1969, is the primary sponsor and donor for this initiative.

On May 4, 2012, a *Tree of Peace* was dedicated to the Kornberg School of Dentistry by Dr. Finkelstein, in honor of his children and grandchildren. Designed by Parisian sculptor Hedva Ser, a UNESCO Artist of Peace, it is a reminder of the strides being made to create a legacy of global peace through



*Visitors from Topchoice toured the dental school this past semester and discussed future collaborations with Temple. From left: Yi Hong, PhD, general manager of Eyar at Topchoice; Dean Ismail; Qihong Fu, DDS, PhD, CEO of Topchoice Medical; Maobin Yang, DDS, MDS, PhD, assistant professor, Kornberg School of Dentistry; and Matthew Palermo, DMD, interim chair of restorative dentistry.*



The "Tree of Peace" stands in front of the Kornberg School of Dentistry and is a reminder to all of the strides being made to create global peace through dentistry.

dentistry. Ser has been recognized for her contribution to the defense of tolerance and the meeting of cultures through art and for her creation of the *Tree of Peace*.

"People have more in common than they differ," commented Dean Ismail at the Kornberg unveiling. "All humans need peace, but not all live in peace. The *Tree of Peace* is a true reminder to all of us that peace is a simple word that has tremendous meaning. It is the foundation for life and prosperity and something we all need to strive for in our lives."

"Attendance at international programs and involvement with the Alliance strengthens Kornberg's position in the global dental school arena," concluded Dean Ismail. "The reputation of Kornberg as a global school will create opportunities to bring together students, faculty and staff from around the world together with Kornberg students and faculty to learn about the U.S. and dental education in our country."

## Dr. Maobin Yang Bringing New Life to Root Canals

If all goes according to plan, Maobin Yang, DDS, MDS, PhD, is going to bring new life to root canals—literally. Dr. Yang, an assistant professor at the Kornberg School of Dentistry, is focusing his research at Temple on the new field of pulpal regeneration, which aims to create methods to replace decayed pulpal tissue with healthy, living tissue.

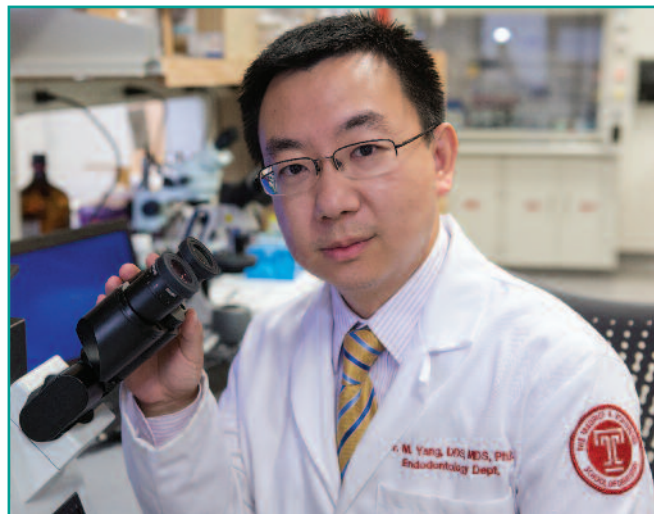
“This is a new direction, especially for endodontics,” says Dr. Yang. “Traditional root canal treatments have been [relatively unchanged] for about 50 or 60 years, and even went back further with the use of inert materials like mercury before that.”

Dr. Yang says there are two main methods for pulpal regeneration. The first, revascularization, is already used in clinics and involves inducing bleeding into the root canal in the hopes that it will encourage new, natural tissue development.

“This is not a very predictable method; some cases fail and some succeed, and we don’t have a lot of control over that,” Dr. Yang says, adding that it is difficult to determine why the procedure succeeds when it does, since it requires pulling healthy, regenerated teeth.

Instead Dr. Yang, in a novel collaboration with the Temple College of Engineering’s Bioengineering and Biomaterials Center, is much more interested in a second method: tissue engineering. This method involves using a combination of stem cells, growth factors and biomaterials to predictably create new pulpal tissue inside the root canal.

The three factors work a bit like a bowl of soup. The stem cells act as the ingredients, the biomaterials serve as the pot in which to hold them, and the growth factors work like a secret recipe: what temperature to use and how long to boil to achieve the best result.



*Dr. Yang performs his clinical research at the College of Engineering’s Bioengineering and Biomaterials Center located on Temple’s Main Campus.*

“The growth factors are usually small molecules, like a protein, that guide cell proliferation to form the tissue you want,” Dr. Yang explains. “But the key question is how to control their release. You need them to work at a certain time, in a certain location. That’s the focus [of our research] right now.”

Although the growth factors might be the most puzzling of the three components of tissue engineering, the biomaterials part of the equation needs answers as well. These materials work as the scaffolding for regenerating tissue, and must have just the right qualities to be effective. That’s where the experts at the College of Engineering come in.

“There are all kinds of biomaterials. You need one that is not too stiff, won’t be rejected by the body and can provide a reservoir for growth factors,” says Dr. Yang. “I arrived at Temple last year, right when the [Center for Bioengineering] was created, and we realized what a great opportunity it was. They’re the experts in biomaterial.”

**“I arrived at Temple last year, right when the [Center for Bioengineering] was created, and we realized what a great opportunity it was. They’re the experts in biomaterial.”**

Dr. Yang works closely with College of Engineering faculty and students, often in the center's 20,000-square-foot, state-of-the-art lab, to develop appropriate materials. One key factor is the material's degradation, which Dr. Yang compares to dissolvable stitches.

"You don't want materials to stay in the human body," says Dr. Yang. "You have the rate of tissue regeneration, so you have to inversely match that rate with the degradation of the scaffolding."

None of this would be possible without recent advances in the study of dental stem cells, which lags behind similar fields. While many of the first stem cells were discovered by researchers in the 1960s and '70s, Dr. Yang says the first dental stem cells weren't discovered until the new millennium.

"The first [dental] stem cell was discovered by a Chinese scholar, who was looking at the inside of his daughter's baby tooth and thinking about what cells are in there," Dr. Yang says. "Now we know of five kinds. And it turns out these cells are obviously more accessible than from cord blood or bone marrow."

The possibilities of dental blood cells have fascinated Dr. Yang throughout his studies and career. Born in China, Dr. Yang earned his bachelor's and master's degrees there and began clinical work. However, he developed a natural curiosity about how new research might translate into clinical procedures and decided to pursue a PhD in biomedical science at the University of Connecticut.

"I completed my PhD in 2009 but kept thinking about how to apply research to the clinic and continued my residency for another three years," Dr. Yang says. "I was doing root canal treatments on a daily basis, and every day I'm thinking about how I take out pulp and put in new material, why not come up with a different way?"

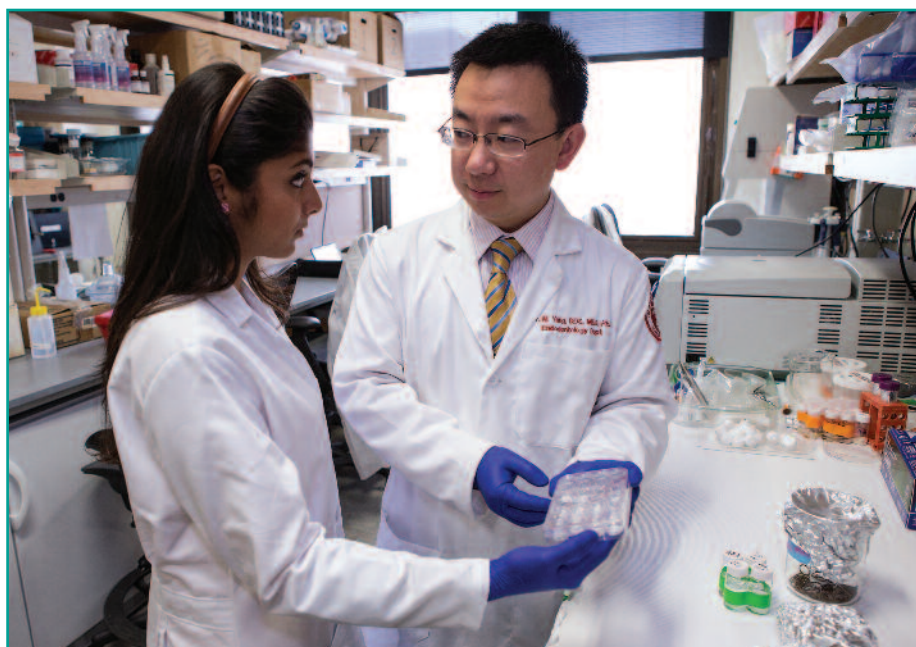
Now, using the resources at Temple, Dr. Yang is trying to do exactly that. And the possibilities are promising. "Every year in the U.S., 22 million endodontic procedures are performed, costing about \$30 billion," Dr. Yang says. "And for kids [who have root canals] the root is not formed and will not continue to grow, so conventional treatments leave a very fragile tooth."

While Dr. Yang's research is currently fully funded by the university, he says that more money is being set aside by organizations like the American Association of Endodontics, which earmarked \$2.5 million for regenerative endodontics in its budget for next year, and the National Institutes of Health.

"This field is going to become more and more competitive because a lot of people think this is the future and will benefit a lot of patients," Dr. Yang says.

And although he won't say just how close the research is to being ready for bench and animal studies, Dr. Yang seems to think he has a jump on the field.

"This is a hot territory now, but so far we haven't found another group doing the same thing," Dr. Yang says. "We believe the things we're working on are very innovative."



Dr. Maobin Yang works alongside his graduate research assistant, Riddhi Ajit Gangolli, who is currently pursuing her PhD in Bioengineering at Temple University's College of Engineering.

## Dr. Mustafa A. Badi A Passion for Radiology



**M**ustafa A. Badi, DDS, MS, assistant professor, Department of Oral Maxillofacial Pathology, Medicine, and Surgery Division of Oral and Maxillofacial Radiology, has a passion for technology and was always looking for a career that would blend his dental background with technology. Both the availability of digital dental radiography in the early 2000s, and the introduction of cone-beam CT (CBCT) technology in the dental field, attracted him to specialize in oral and maxillofacial radiology.

“I am particularly attracted to the field of oral and maxillofacial radiology because it is the basic study of dental diagnostic science,” explained Dr. Badi. “Comprehensive

and effective treatment of any dental problem relies on good and sound diagnosis. Also, currently there is a shortage of oral and maxillofacial radiologists trained in reading and interpreting the advanced imaging modalities available in dentistry today.”

Dr. Badi joined Kornberg School of Dentistry in January 2013. A graduate of Istanbul University Faculty of Dentistry, Istanbul, Turkey, he attended the University of Texas Health Science Center, San Antonio, for his residency and postgraduate training. He had been in the dental field for 11 years prior to going back to graduate school to specialize. His previous experience in the field of dentistry includes general dentistry, CAD/CAM den-

tistry, radiology and dental informatics.

Oral and maxillofacial radiology is the ninth specialty of dentistry recognized by the American Dental Association. An oral and maxillofacial radiologist (OMR) is a dentist specialized in the acquisition and interpretation of radiographic imaging studies performed for diagnosis and treatment guidance for conditions affecting the maxillofacial region. Specialization in OMR requires the completion of residency in an American Dental Association CODA-accredited program. Training includes a thorough knowledge on techniques and interpretation for maxillofacial CT, CBCT, MRI, ultrasound and other pertinent modalities. OMRs may be further qualified by passing the American Board of Oral and Maxillofacial Radiology (ABOMR) exam.

The radiology clinic at Kornberg School of Dentistry is equipped with digital intraoral sensors, digital panoramic radiography machines, state-of-the-art cone-beam CT machines (CBCT) for both small and large fields of view. It has a state-of-the-art radiographic interpretation room with dual monitors and fine viewing software and a central storage of images in a PACS system that makes it accessible throughout the school.

“Conventional 2D dental imaging technology sometimes has limita-

tions in dental diagnosis,” said Dr. Badi. “Two-dimensional radiographs are a representation of a 3D subject. The true third dimension in dentistry had been missing until the introduction of CBCT technology in the late 1990s and early 2000s.”

CBCT technology utilizes a cone-shaped beam of x-rays to produce computed tomography images of the craniofacial structures at a fraction of the dose usually used in medical imaging. During a CBCT scan, the scanner rotates around the patient’s head, obtaining many base images. The software collects the data and reconstructs it, producing a digital volume composed of three-dimensional voxels of anatomical data that can then be manipulated and visualized with specialized software. CBCT has become increasingly important in treatment planning and diagnosis in implant dentistry, orthodontics and endodontics.

“At Kornberg, we are lucky to have a good team of faculty with years of experience who specialize in different aspects of dental diagnostic sciences, including oral medicine, oral pathology and oral radiology,” said Dr. Badi. “Since we are in an educational institution, we want our students to learn the best patient care practices.”

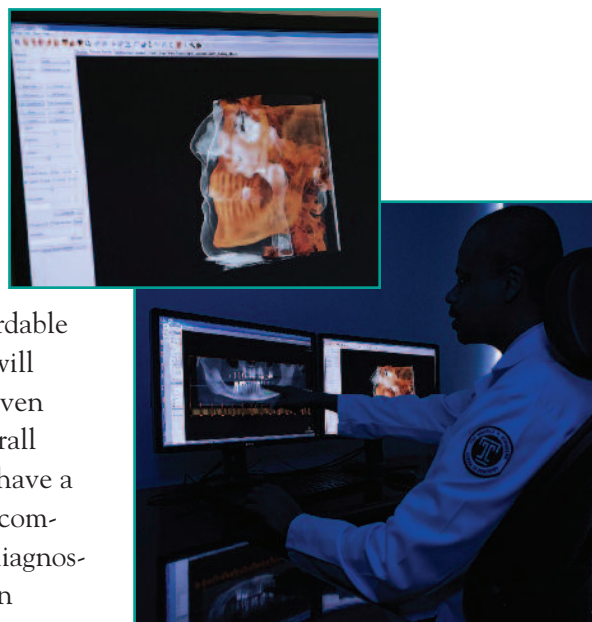
A goal for Dr. Badi, and all of the faculty and staff, is to provide an overall positive experience to en-

courage more patients to seek dental care. “There are a number of patients that avoid dental care due to dental phobia. The more positive the experience patients have with their dentists, the more they’ll be willing to seek dental care. The goal is to encourage and improve overall oral healthcare in as many patients as we can and to provide information and directions on where they need to go next.”

Dr. Badi explained that Kornberg has focused on reorganizing the clinical training structure to reflect a more realistic general practice modality that will equip the students with the knowledge and experience they expect to face in their real-life dental careers. “These general practices also have the advantage of providing a permanent location for the new patients getting admitted in the dental school. This makes it easier for patient’s dental problems to be addressed in a vast dental school setting.” He added that Kornberg has always been known to provide excellent clinical training to dental students and wonderful dental services to the community at an affordable cost. “I am hopeful that we will grow to provide services to even more communities. The overall goal is to train dentists that have a strong background of ethics combined with evidence-based diagnostic and clinical skills that can

improve the overall oral healthcare of the community. At the same time, I see the school providing excellent affordable dental care that is focused more in comprehensive treatment and thereby influences dental behavioral changes to improve the overall oral health care standards.”

In the future, Dr. Badi plans to develop and provide training that enables the new dental graduates to deliver quality dental care to the public. “Students need to be trained and educated in the importance of learning good dental diagnostic skills, understanding the limitations of dental radiography, radiation protection and safety, modern conventional and advanced imaging modalities, indications and limitations of emerging technologies. I will also focus on mentoring students about the importance of providing patient-centered overall oral healthcare.”



## Dr. Merriam Seyedain, '11 Her Role in the Future of Dental Care?

The question prompted thoughtful and concise answers. That's because Merriam Seyedain, who has always wanted to teach, knows what she wants to impart to her students as they begin thinking about their future dental practices.

A periodontist who is also assistant professor in Kornberg Dental's pre-doctoral clinic, Dr. Seyedain says her goals are twofold: to teach students to see the big picture for better comprehensive care and to develop confident students who can have positive relationships with patients.

"Comprehensive care is how we were trained here in residency," she points out. "But when I compare now to what I was taught as a resident, over time I've realized that the patient relationship is also very important. I talk to the students about it.

They should take time to listen to patients, see what they want and what they're interested in. Then they will be more open to treatment because they know they have a part in the treatment plan."

Asked how the Dental School supports her goals, she responds positively. "Our students get a lot of treatment planning. The faculty I work with are all on the same page. We all practice and teach in a com-



prehensive way. Faculty with different specialties work together, giving students the information they need."

What also helps, she notes, are the new clinics. "It's much easier to teach now. In the past every specialty was separated. Now we work like in an outside practice, with all faculty available in every clinic."

**"Over time I've realized that the patient relationship is also very important."**

Dr. Seyedain graduated from the University of Pittsburgh's

biology program and also from its dental school, where her brother is on the periodontal faculty. But when looking for a residency, she remembers how Kornberg Dental caught her attention. "I felt really comfortable and connected with the faculty from the first day. We have a lot of great names in research in our department and I believe all faculty are clinically out-

standing. I feel really good about being here and am so glad I chose Temple. It's a second home for me and has been for five years now."

Raised in Iran with a father who still practices as a periodontist there, she credits him with teaching her what still influences her professionally every day. "I used to assist him, and he would emphasize, 'Always live your day so you're at peace with yourself when you go to sleep at night.'" She recalls that it always came up with both parents, but he thought it was also important in the field of periodontics. "In fact, it's a big thing I think about all the time," she says. "That's how I try to make sure I do what's best for the patients. I basically imagine that they are my own parents or even myself sitting in the dental chair."

It's just one more indication of how patient relations are always on her mind.

# The Future Depends on Faculty, Faculty, Faculty

In just these few words, Dean Ismail sums up the importance of investing in faculty recruitment and development. In response, the Dental School plans to establish a new fund that will incrementally raise \$5 million over the next 10 years.

"This new fund will enable us to recruit new faculty, significantly strengthening our capacity to maintain excellence in clinical education and patient care," explains Jennifer Jordan, director of development. "In the past we haven't had the capacity to conduct sponsored research. Yet the ability to maintain a strong dual mission in clinical education and research is necessary in the future."

Always thinking ahead, the dean envisions a team of highly qualified, academically oriented clinical and biological science educators and researchers, so the school can expand on the predoctoral and postdoctoral levels. "Temple Dental School will be one of the top-ranked schools in the U.S. and the world in its reliance on research and science for building strong health-oriented clinical programs," says Dean Ismail. "The opportunities are boundless."

To get there, he is asking two questions. What do current faculty need for their development? What type of additional faculty do we need to fulfill our mission?

With plans already underway to hire new faculty, the dean notes, "We expect to be in a pivotal posi-

tion to achieve what many thought was impossible just a few years ago." That's due to the school's innovation in financially managing its resources and in creating new financial streams—which has the support of Temple's president and provost and is in line with the university's new budget model that will be introduced in 2014.

This new phase for Temple Dental fits with the university's current direction of building significant scholarship and research capacity. "We are already part of this new emphasis at Temple," says the dean.

"For our students, the benefit will be an engaging and scientifically based education."

**"We expect to be in a pivotal position to achieve what many thought was impossible just a few years ago."**

To prepare the school for this new path, Dean Ismail will direct a new course, "Science in Dental Practice." It will offer background knowledge on the

scientific method and its applications in clinical, biomedical, epidemiological healthcare and behavioral research. For alumni, the course is noteworthy because its annual Science in Dental Practice day will be an opportunity to earn continuing education credits. The day's presentations of research projects and critical appraisals of clinical questions will engage all students and faculty in considering the applications of science in dental practice.

Be sure to read more in this issue about what's planned for "Science in Dental Practice": New Course Focuses on Research, page 31.



# FACULTY News

**Dr. Daniel Boston**, associate dean for comprehensive clinical care, presented an abstract as a poster presentation at the national American Dental Education meeting in Seattle in March 2013 on “New program for online capstone comprehensive case presentations.” Dr. Boston was also appointed to the editorial board of the online journal, “Case Reports in Dentistry,” and was issued the following patent as an inventor: *Selective Dentin Caries Excavator, Italian Patent 1 143 873, November 28, 2012.*

**Dr. Susan Chialastri**, associate professor in the department of periodontology and oral implantology and graduate of the class of '87, received the 2013 Faculty Award from the Class of 2013. This was presented to Dr. Chialastri at the Senior Banquet dinner at the Water Works Restaurant on May 9, 2013. Dr. Chialastri was also named the Faculty Speaker at Commencement for the Class of 2013 on May 17, 2013, at the Academy of Music.

**Dr. Chialastri** is the 2013 recipient of the College of Health Professions Gallery of Success Award and the 2012 Herbert G. Frankel Award as Outstanding Xi Psi Phi Alumni, which was presented to Dr. Chialastri by the Supreme Chapter representatives on September 4, 2013.

Dr. Chialastri also completed the Teaching in Higher Education Certificate Program in July 2013 through the Education Department at Temple University.

In January 2013, **Dr. Lisa Deem, '87**, associate dean for Admissions, Diversity and Student Services, was elected chairperson of the Pennsylvania State Board of Dentistry. Dr. Deem will serve for at least a year.

On Saturday, September 14, 2013, **Dr. Thomas Deem, '85**, was honored as “faculty member of the game” at Lincoln Financial Field as the Temple Owls Football Team faced the Fordham Rams.

Dr. Deem is an adjunct faculty member in the Department of Restorative Dentistry. He is an

outstanding faculty member at the Dental School and also volunteers his services for Temple Athletics.

**Dr. Thomas Rams**, professor in the Department of Periodontology and Oral Implantology, was awarded his PhD in Medical Sciences on September 9, 2013, after presenting his thesis on “Antibiotic resistance in human periodontitis and peri-implant microbiota” to the University of Groningen in the Netherlands.

**Dr. Matthew Palermo**, interim chair of the Department of Restorative Dentistry, lectured at two national meetings over the past year: the American Academy of Periodontology Annual Meeting in November 2012 and the American College of Prosthodontics Educators Meeting in April 2013. Dr. Palermo was also elected as the Chair of Predoctoral Prosthodontic Educators Committee in the American College of Prosthodontics and the Executive Counsel of the American Prosthodontic Society.

**Dr. Jie Yang**, professor in the Department of Oral Maxillofacial Pathology, Medicine and Surgery, hosted three international visiting research scholars over the past two years; **Dr. Ling Zhu** from Shanghai Jiao Tong University School of Stomatology; **Dr. Zuyan Zhang** from Peking University School of Stomatology, and **Dr Fangfang Xie** from Guangxi Medical University School of Stomatology.

**Dr. Yang** was also invited to be either the keynote or guest speaker at the following international schools or congresses: 53rd Dental Information Education Scientific Forum, Faculty of Dentistry in Padjadjaran University; Faculty of Dentistry at Mahasaraswati Denpasar University; 9th Asian Congress of Oral and Maxillofacial Radiology; and the Chinese Stomatological Association's Annual Meeting in 2012.

Dr. Yang was recently elected to serve as the secretary to the Board of the International Association of Dento-Maxillo-Facial Radiology (IADMFR) and elected to serve on the Executive Council of the American Academy of Oral and Maxillofacial Radiology and serve as the Councilor for Educational Affairs.



# New Course Focuses on **RESEARCH**

**H**ow can Kornberg more fully engage the dental school community in research activities? That's the question a new course, "Science in Dental Practice," is designed to answer.

For instance, suppose students are grappling with the issue of whether to consider dental implants for a patient taking bisphosphonates. In this course, students will do a structured assessment of current literature, looking for all available evidence. Then they'll appraise the evidence and make some conclusions about how to apply it to professional practice, while also considering patient values and preferences. The idea is twofold: to involve students and faculty in the process of scientific inquiry and to provide feedback into the curriculum and patient care from evidence-based findings.

Noting the benefits for students, Dr. Maria Fornatora, associate dean for Academic Affairs, is enthusiastic. "This unique, innovative educational and professional experience will give all students an opportunity to be involved in research and learn how to critically appraise and apply the literature to patient care. It will also sharpen their ability to think critically about patient care by asking the right questions and seeking evidence to support what we do and how we practice now and in the future."

She adds, "Being involved in school-wide research and scholarship as a predoctoral student is a terrific opportunity in and of itself. But the course also provides our students with the skills they need after they graduate, so they can fulfill their professional responsibility to be lifelong learners who incorporate emerging information and best evidence into their daily practices."

The vision of Dean Ismail, the course is scheduled to begin a phased-in implementation within the next 18 months.

Two components will be included: an online seminar series through Temple E-Campus and a practicum that requires each student to attend four annual Scholarly Activity and Research (SAR) Days held in the spring and to actively participate in at least one SAR Day by presenting a scientific poster. The online instruction will focus on such topics as philosophy of science and the scientific method, ethics in human and animal research, how to do a literature search, methods in molecular biology, and evidence-based dentistry. To develop a poster, each faculty-mentored team of 4-5 classmates will answer a question relevant to oral healthcare or dental education. They'll reach their conclusion by appraising biomedical, clinical, translational, educational or epidemiologic literature and research. Initially, posters will be printed and displayed in Mitten Hall, and students will present orally to their peers, browsing faculty and the judges. "Eventually," says Dr. Fornatora, "it would be ideal to have large monitors instead of boards, so the posters are displayed digitally. It would be much greener!"

Currently, predoctoral students seek out faculty and projects if they're interested in research. Since they do research only in their limited spare time, just a small minority participate now in research days, says Dr. Fornatora.

Although the dean developed the course, he sought input from three faculty groups: the Research Committee, the Management Committee and the Curriculum Committee. The result is one that Dr. Fornatora is "delighted to be able to include in our DMS curriculum."

*Two components will be included: an online seminar series and a practicum.*

**A**t first glance, the Kornberg School of Dentistry's Project ENGAGE may appear to be a \$1.75 million philanthropic endeavor. Funded by a \$1 million grant from the United Health Foundation and a \$750,000 grant from United Healthcare, program workers will ring phones and knock on doors in North Philadelphia neighborhoods in an effort to help a vastly underserved youth demographic access dental care.

Currently, only 30 percent of children under the age of 6 in the zip codes near Temple University have access to proper dental care. Project ENGAGE hopes to double that number to 60 percent by providing education, assisting in scheduling appointments at local care clinics and even by applying varnishes or sealants in living rooms.

However, there's something bigger at work. Kornberg Dean Amid Ismail, the primary architect of Project ENGAGE, hopes that in several years healthcare industry experts will look back and see the project as the original blueprint for a new way of providing, and paying for, dental care.

"The current dental care system relies on people to come to us, and the reality is that people will often only come when they have a problem, even when resources are available to them," Dean Ismail says. "But by placing more emphasis on prevention and management of disease, we may be able to shift very high-cost hospital treatments to lower-cost clinical treatments."

Dean Ismail has been a believer in this approach even before legislation like the Patient Protection and Affordable Care Act altered the national conversation around healthcare. He had shopped the idea to different funding sources for more than half a decade before finally receiving the UnitedHealth grants last winter.

# PROJECT ENGAGE

Dean Ismail says it's just a matter of timing.

"We were ahead of our time proposing this [five years ago], before people started talking about systems and integrated care," Dean Ismail says. "And in this case, a health insurance company became interested in testing a new model, because everyone is tracking the realities of high-cost care. And we believe we can provide a solution."

Dean Ismail is a major proponent of providers' taking the first step toward improving an individual's healthcare, something he views as the opposite of the current system and came to realize while working with inner city neighborhoods in Detroit. "It's not just about hospitals and treatments, but what happens in the community and the home," Dean Ismail says. "How do you encourage people to take care of their own decision making, and change their lifestyle?"

However, there was one major hurdle to the dean's idea to visit families in their own homes. In order to find these at-risk individuals, he would need to access large swaths of patient medical histories and home addresses. Not only that, he would then need to share this data with community workers hired and trained from the very neighborhoods that the program targets. Not an easy sell for a healthcare provider's legal team.

"We went into uncharted ground, with a health insurer giving data on their patients to a dental school, for use in a large registry, which will then be accessed by people in the community," Dean Ismail says. "When we first presented that, they said 'Are you really serious about doing this?'"

However, after a lengthy legal review that involved United Healthcare, Temple University and state agencies, the project was green-lighted. The majority of the patient data will be provided by United Healthcare, with records added from the state Medicaid program,

Kornberg and partnering clinics. The school brought in a third-party vendor to build a registry over the fall, and community workers will be making their first calls this winter.

But then the big question will need to be answered: Will the program become financially sustainable? Dean Ismail says initial funds will last less than two years. Anything beyond that will require new capital.

“We’re going to rely on income generated from services to sustain the program,” Dean Ismail says. “So that’s another novel aspect: If we’re successful, other partners will come into the program with funding. You can consider this the startup fund, and then we’ll start gaining operational funds.”

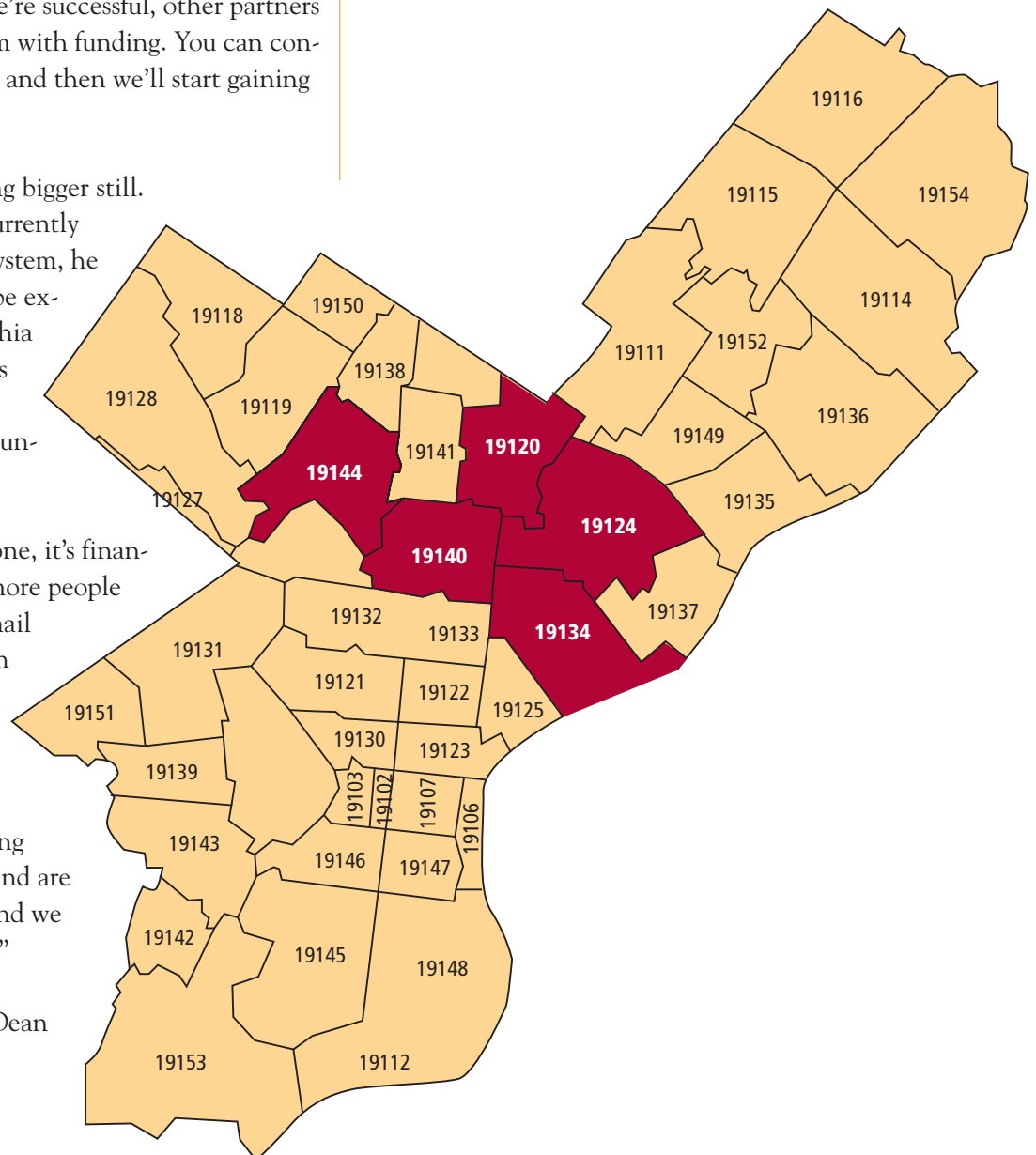
But Dean Ismail is thinking bigger still. Given what he sees as a currently unsustainable, high-cost system, he believes the model could be expanded to other Philadelphia neighborhoods and regions of Pennsylvania, and even be replicated across the country.

“Depending on how it’s done, it’s financially beneficial to bring more people to the provider,” Dean Ismail says. “We’re at the point in time where more resources need to be invested to expand the base and expand access to care. High costs are really shifting the way dentists practice and are impacting their income, and we need a different approach.”

Because of this dynamic, Dean Ismail believes that

the \$1.75 million in grant money is not so much a philanthropic donation for United Healthcare as it is an investment in the future.

“We can’t afford a system anymore where we provide care to a community and then leave,” Dean Ismail says. “This is to be a sustainable model, and insurance companies agree we need to increase the base. We can’t keep pouring in money trying to make the current pie work. We need to make a new pie.”



The Kornberg School of Dentistry has many faculty members currently working on research that will significantly impact the future of the field of dentistry. As we look to see how the next 150 years of dentistry come to life, there is no doubt that our researchers will play a role in this. In this section, we take a look at two of our researchers and find out what motivated them in their fields, what projects they are working on, and what their future plans are.

### STEVE JEFFERIES

#### 1. What projects are you currently working on?

My major research project is translational research concerning bioactive dental cements as well as the examination of some of their unique properties. I am also in collaboration with a researcher in Europe on a unique technology for remineralization and fluoride/drug delivery.

#### 2. Who will this benefit and how?

These materials and their bioactive/remineralization properties may aid in the remineralization of early carious lesions and may reduce the risk of secondary or recurrent dental decay in restored teeth.

#### 3. Are you collaborating with anyone?

Professor Håkan Engqvist at the Angstrom Institute in the University of Uppsala, Uppsala, Sweden.

#### 4. What has been your most significant achievement (scientific or not)?

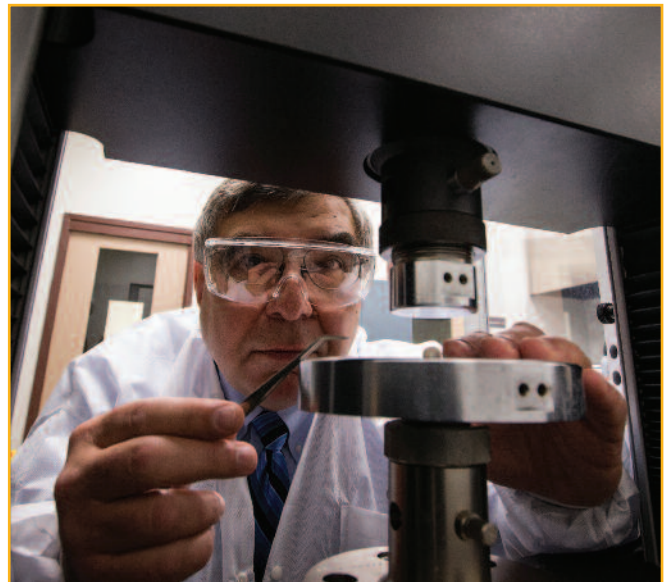
Scientifically/technologically: the invention of Enhance Finishing Device/Enhance Finishing-Polishing System; and my translational research on bioactive cements.

#### 5. Favorite scientist/researcher and why?

May I list two:

Benjamin Franklin: He was truly a multitalented, politically savvy scientist.

Ignaz Philipp Semmelweis: An early pioneer of anti-septic procedures whose highly important scientific observations, which challenged the prevailing dogma, were accepted only many years after his tragic death.



#### 6. Tell us about your first science project/experiment:

I built a wind tunnel for a 7th grade science project.

#### 7. What do you hope to accomplish in the future?

Continue my research on the novel and unique properties of bioactive dental cements.

## THOMAS RAMS

### 1. What projects are you currently working on?

I am evaluating the extent of antibiotic resistance among subgingival and submucosal bacterial pathogens in human chronic periodontitis and peri-implantitis. Additionally, I am assessing the antibacterial effects of dental lasers on periodontal bacterial pathogens.

### 2. Who will this benefit and how?

Patients with chronic periodontitis and peri-implantitis may receive better optimized antimicrobial treatment regimens that are selected based on knowledge of antibiotic-resistance patterns of their targeted pathogenic bacterial species. Additionally, study of the antibacterial effects of dental lasers on subgingival bacterial pathogens may help explain clinical outcomes associated with certain dental laser treatment protocols.

### 3. Are you collaborating with anyone?

I collaborate with Dr. Jon B. Suzuki within the dental school, and outside the dental school with Dr. Arie J. van Winkelhoff, a periodontal microbiologist at the University of Groningen in the Netherlands, and Dr. Jorgen Slots, a periodontist and oral microbiologist at the University of Southern California in Los Angeles.

### 4. What has been your most significant achievement (scientific or not)?

Co-authoring with Dr. Paul Keyes at the National Institutes of Health a series of clinical research studies in the 1980s on microbiologically modulated non-surgical periodontal therapy.

### 5. Favorite scientist/researcher and why?

Dr. Paul Keyes was my first periodontal disease mentor during my dental staff fellowship at the National Institutes of Health in the 1980s. Dr. Keyes, a legendary figure in dental research, is the most decent and intellectually honest individual I have ever met, and an excellent role model, from whom I learned far more than merely how to better treat periodontal diseases with non-surgical anti-infective treatment regimens.



### 6. Tell us about your first science project /experiment:

Study of mutagenic compounds in chlorinated waste water effluent during my master's degree program in environmental health sciences at Johns Hopkins University School of Public Health prior to my dental degree studies.

### 7. What do you hope to accomplish in the future?

Further research studies and journal publications focused on application of diagnostic microbiology, antimicrobial agents, dental lasers, and probiotics in periodontal disease therapy.

## MARK NOVASACK

Conquering Dental School  
With a Little Beef Jerky On The Side**Think you're busy? Think again.**

Mark Novasack is a 32-year-old husband, father of two, former engineer, entrepreneur and full-time, third-year dental student at Temple University Kornberg School of Dentistry.

**FROM ENGINEERING TO DENTISTRY**

After graduating from Lehigh University in 2003 with a Bachelor of Science in mechanical engineering, the Linwood, N.J., native took a job as a design engineer for a consulting firm in New York City. After years in the Big Apple, he switched jobs to a firm in King of Prussia and relocated to Chestnut Hill, Pa., where he lives now with his family.

Novasack was on the fast track to success as an engineer—he had recently earned his professional engineering li-

cense, which is often compared to as rigorous a process as a lawyer preparing for the bar exam.

After seven years working as an engineer, Novasack had a change of heart and decided to pursue a career in dentistry.

**A COMPLETE 180**

During their honeymoon in 2008, Novasack and his wife, Kathleen, talked at length about their dreams and future together. There was a poignant moment when Novasack admitted that he wasn't sure engineering was what he wanted to do for the rest of his life, and he and Kathleen mulled over the idea of his going back to school.

"I looked at the people above me at my job and just realized that I wanted to do something different," he says. It was then that dentistry popped into Novasack's head, and he began to seriously consider returning to school to begin his career for the second time.

No stranger to the dental world, Novasack grew up around the field. His father, George F. Novasack, has run a successful practice in Somers Point, N.J. for years.

"My dad never pushed me into the field, but I always had a feeling in the back of my mind that I might end up becoming a dentist," Novasack remembers. "I wanted to do more—to directly help people and take them out of pain. In my career as an engineer, I wasn't able to do that."

His friends thought he was nuts to give up all he had accomplished as an engineer, but Novasack trusted his gut. He also had the support of the most important person in his life—his wife, who agreed to take on the responsibility of taking care of the family while Novasack pursued his dream.

“Sometimes, you have to make decisions that aren’t popular. I knew this decision was right for me, and I had to follow the path,” he explains.

### PURSUING HIS DENTAL SCHOOL DREAMS

Novasack quit his job as an engineer and began to research his options.

Four days after his daughter Juliette was born, Novasack started a post-baccalaureate program at Penn State Abington in May of 2010 to complete course requirements in biology, chemistry and anatomy before he could apply to dental school.

There, he joined a pre-dental club, where he met Brian Hahn, recruitment coordinator for Kornberg Dental. It was Hahn who solidified Novasack’s desire and drive to go to dental school—specifically at Temple University.

### BECOMING TEMPLE MADE

With the help of Hahn, Novasack enrolled at Temple and never looked back.

One of the factors that drew Novasack to Temple was Kornberg Dental’s focus on clinical experience. “The people we serve at Temple need our help. That’s all I

really needed to know.” he says, speaking of Temple’s patient pool, consisting of a mostly underserved population.

Another reason Novasack chose Temple is because of its strong reputation, not only in the Philadelphia dental world, but nationally and internationally, as well.

“When I tell people I go to Temple, they say, ‘Oh my goodness, Temple makes the best dentists!’” Novasack explains. “Temple grads just know what they’re doing.”

Novasack has nothing but positive things to say about his experience at Kornberg Dental.

“The instructors at Temple are just spectacular. Having gone through four years of engineering school, the teachers I’ve had at Temple are infinitely better than any teachers I’ve ever had in my life,” he says gratefully. “I owe a lot to them.”

### BEEF JERKY

In addition to his full-time studies at Kornberg Dental, Novasack is an entrepreneur, running a business on the side focused on the most unlikely of products: high-end beef jerky.

Every year, Novasack’s parents have a big Christmas party, where every attendee is responsible for







Photography by Michael Persico.

bringing a signature item. After learning how to make beef jerky from a colleague at his old engineering job, Novasack decided, almost as a joke, to make his own beef jerky to contribute to the party. Surprisingly, the jerky was a hit.

For fun, Novasack experimented with different flavors of jerky and eventually looped in his friend and neighbor, Marcos Espinoza. Over drinks in the spring of 2012, they talked about starting a business, with the goal of making beef jerky Philadelphia's next big thing.

After bringing on a third partner, the business got off the ground, officially launching with the name Side Project Jerky, keeping ingredients and production local, working with a butcher in Chestnut Hill and a kitchen in Manayunk.

Buzz began to build—*Men's Journal* magazine included the product in a holiday gift guide and *The Wall Street Journal* mentioned the jerky in a Super Bowl eats roundup. The business is still growing and

the jerky can be purchased from local retailers in Northern Liberties, South Philadelphia and Center City, as well as nationally in New York, Oklahoma and Georgia.

Novasack enjoys melding together his jerky business with his passion for dentistry by using his classmates as a focus group for new flavors. (And yes, in case you were wondering, his classmates DO poke fun at him for the odd mix of beef jerky and healthy smiles.)

#### A BALANCING ACT

"It's not all rainbows and unicorns. There's a lot of family sacrifice," Novasack says, when asked how he balances it all.

Novasack treats his studies at Kornberg Dentistry like he did his career as an engineer. He wakes up early, arrives on Temple's campus long before other students, attends classes and is often the last one to leave at night, after an evening of studying. He prides himself on never doing school-work in his home. He works hard to separate his school life and family life.

However, that balance can't always be achieved. Novasack recalls a recent Father's Day spent studying for finals from 9 a.m. to 9 p.m. when he would much rather have been spending time with his wife, 3-year-old daughter, Juliette and 1-year-old son, Bennett.

"It's been a hectic three years," he admits. "But I know it's all going to be worth it in the end."

#### LIFE AFTER DENTAL SCHOOL

Novasack is looking forward to the day in May 2015 when he completes dental school and can finally become a practicing dentist.

He plans to move his family to Atlantic County, N.J. to join his father's dental practice in Somers Point. In the meantime, Novasack enjoys shadowing his dad when he visits and looks forward to getting to know the patients there and continuing the successful practice his father built.

"After all my family and I have gone through, I'm going to be so well equipped to handle myself as a professional dentist. I'll be able to juggle a full-time job while having freedom and flexibility in my schedule to provide a better life for my family," he says. "That is what I see at the finish line. That's what pushes me through the tough times."

# Student Achievements

**DR. SARAH GRAY, '13**, was selected by the American Association of Women Dentists to receive the 2013 Colgate Research Award for her efforts in showing academic distinction and demonstration of excellence in research.

**Hometown:** I'm from the suburbs of Philadelphia.

**Undergraduate School and Major:** Wake Forest University,  
**Major:** BS Biology, Minors in Spanish and Chemistry  
**Kornberg School of Dentistry:** DMD

**Why did you decide to study dentistry:** I chose to study dentistry because I enjoy working with people and believe that dentistry is a unique combination of science and art. I am currently in the orthodontic residency program because I love that, in orthodontics especially, you can positively affect patients' confidence and self-esteem with your treatment.

**Future Plans:** I plan on practicing orthodontics near Philadelphia and want to teach in the orthodontics clinic at Temple.



**MS. ANDREA FRANTZ, '16**, received a glowing letter of recommendation from Columbia University's Professor Burton L. Edelstein for her outstanding work during her summer internship at the Children's Dental Health Project. During her internship, Ms. Frantz worked to develop a conceptual model that incorporated multiple constructs from recognized behavioral theories to explain a pediatrician's election (or failure of election) to provide oral health services to young children in conformance with AAP and AAPD policy.

**Hometown:** Scranton, Pennsylvania

**Undergraduate School and Major:** University of Pennsylvania  
**Major:** Health and Societies

**Why did you decide to study dentistry:** For a student interested in clinical care, public health and the arts, dentistry is an ideal career. An ever-changing and always challenging field, dentistry will allow me to treat oral disease in individual patients while pursuing research directed at lowering the burden of disease in the entire population.

**Future Plans:** I am currently looking forward to beginning my time in clinic! Although I hope to combine both a clinical and research-oriented career with an eye toward public health, I am excited to experience the multiple disciplines that dentistry has to offer.

## ALUMNI **Award** RECIPIENTS

The alumni awards program began in 2011 to pay tribute to Kornberg alumni who have made major contributions to society and dentistry in general. Alumni are asked to submit nominations and the Board of Directors of Kornberg votes on the honorees. The awards are presented at Alumni Day each spring.

"These are alumni who have made outstanding achievements in the field of dentistry and are true humanitarians," said Alan Simkins, DMD, chairman of the Awards Committee. "There are over 7,000 Kornberg alumni who are paying tribute to these individuals. It is truly a great honor for the recipients."

### The 2013 Awardees are:

#### **Business Award:**

##### **Neil R. Patel, DMD, '09**

Dr. Patel was recognized for his business accomplishments and passion for innovation. He is the founder and CEO of Molar Geek, a social platform established to create a venue for students, residents and doctors to collaborate in the field of dentistry.

#### **Humanitarian Award:**

##### **Jeremiah J. Lowney, DDS, '61**

Dr. Lowney was recognized for his vision and work with the Haitian Health Foundation (HHF), of which he is founding president. The organization does outreach work in southwestern Haiti, providing full healthcare and disease prevention programs. He was awarded the White House Champion of Change Award in 2013, one of 12 awards given nationally in recognition of humanitarian service.

#### **Leadership Award:**

##### **Arnold S. Weisgold, DDS, '61**

Dr. Weisgold was recognized for his leadership role in the areas of periodontal prosthesis, restorative dentistry, esthetics, implant prosthodontics and occlusion. He is a consulting editor for several journals and received the Saul Schluger Memorial Award for Clinical Excellence from the Seattle Study Club.

#### **Service Award:**

##### **John V. Esposito, DDS, '61**

Dr. Esposito, associate professor emeritus, was recognized for his knowledge, time and effort as a beloved faculty member of the Kornberg School of Dentistry. He was awarded the Xi Psi Phi Fraternity Instructor of the Year eight times and the Student Council Faculty of the Year award at Temple Dental.

In 2006, he established the John V. Esposito, Jr. Scholarship Fund and the endowment was completed in 2013 by the class of 1983 in honor of his service and commitment to the school.

#### **Education Award:**

##### **Edwin L. Granite, DMD, '57**

Dr. Granite was recognized posthumously for his contributions toward the advancement of education in dentistry. He traveled to third-world countries to rebuild faces of needy children in indigent communities. He was honored at the Delaware Academy of Medicine's Annual Meeting and was proud to have the clinic where he practiced at Christiana Care, the Edwin L. Granite, DMD, Oral and Maxillofacial Surgery & Hospital Dentistry Clinic, named in his honor.

#### **Distinguished Achievement Award:**

##### **Beatriz Mirabal-Garces, DMD, '02**

Dr. Mirabal-Garces was recognized, as a colleague of her describes, "for being a gentle soul who represents real understanding and empathy and the ability to reach down and help somebody up." Dr. Mirabal-Garces owns her own practice, The Garces Dental Group. In 2012, Dr. Mirabal-Garces and her husband founded the Garces Family Foundation, an organization committed to helping improve the health and education of the underprivileged immigrant population in Philadelphia and surrounding neighborhoods. The Foundation will also support the Farm to Families program established by the St. Christopher's Foundation for Children.



The Kornberg School of Dentistry  
has much to look forward to following its  
150th anniversary celebration.



*With shared commitment, the*  
**ABRAMSON FAMILY FOUNDATION**

*encourages alumni and friends to  
continue their support of  
the Kornberg School of Dentistry  
as we serve our students and patients  
over the next 150 years.*



## 'WHEN YOU TAKE, YOU GOTTA GIVE BACK'

### Class of 1964's Living Legacy

Their class already had set one precedent: They're the school's biggest supporters relative to their size. So why not set another? "Exactly," thought Alan Simkins.

His idea, which is getting enthusiastic response from classmates, is a \$50,000 endowment for student scholarships. "It honors our class and the school and gives to the students," he explains, "and it could be the first of many endowments as other classes say, 'We don't want to be left behind.'"

The concept hit Dr. Simkins not all at once, but over time. The seed was planted when his father, also a dentist, always talked about giving back. Then the thought continued to grow through Dr. Simkins' years on the Alumni Association, including a term as president and chair of the Awards Committee. Encouragement from a close friend and Alumni Board member, Dr. Leonard Abrams, and from his dental practice partner to serve the school nourished the idea, as did regular contact with his close-knit class.

"We've kept in touch," he says. They've also stayed involved with the school. Five of his classmates have been on the Alumni Board.

Asked what binds the Class of 1964 together so tightly, he points to their backgrounds. "We were from middle-class and working-class families. We knew Temple gave us the opportunity to do things, to raise our children and have a better life."

Pausing for a moment, he remembers a comment of then-dean, Dr. Timmons. "We were sitting in class, and he said, 'Turn to the man on your left and on your right. One of you won't be here for graduation.' But Timmons was wrong about our class. We were motivated and out of 120, most of us graduated."

The handful of vets in the class provided great role models. "They were men in their 30s who had served their country, were serious about school and married with children," he recalls. "We were boys. They made a big impression on us."

He continues, "Many in my class worked two to three jobs while in school. One of us, Irv Snyder, got up at four in the morning to deliver papers before going to class, then worked as a waiter at night and would go back and study. Others were painters in the summer and came back to school in the winter. School prepared us for what life was going to be like."



*Dr. Alan Simkins, '64*

With that kind of work ethic, Dr. Snyder became successful, as they all did. "Coming from New York and Pennsylvania mainly, we've all done well professionally," he says. However, he points out that "if aid had been available, life would have been easier."

Noting the changes at the school now, Dr. Simkins says his classmates are seeing the "180-degree turnaround," and that's another reason for their support. "We want to be sure that students who need help aren't in the same situation we were. We'll have a committee who will pick the students warranting the scholarships."

## Letter from Dr. Robert Levine

Dear Kornberg Alum,

It has been an honor and privilege to serve as President of your Alumni Association for the past year. Sincerest thanks to all for the tremendous support of our 150th Anniversary commemoration. Our Alumni of KSOD are truly exceptional professionals; they are first-rate clinicians, teachers and leaders in local and national dental organizations and a positive force within their communities.

Equally rewarding to me has been the opportunity to work with an extremely dedicated and hard-working board. Together, we composed a **Mission and Action Statement** declaring to all our vigilance and dedication to ensuring the betterment of our students, alumni and school. Additionally, the Alumni Association board launched a bold, new **"Mentoring for Life" Program** for our students to establish with alumni mentors lifelong relationships, beginning with the students' first day of school and continuing through their transition to professional life and beyond. The main goal being to inspire personal growth, encouraging volunteerism, vision for the future, cultural sensitivity and philanthropic awareness, all values reflected in the core of the dental profession. On a professional level, mentors will provide guidance to the mentee on residency/specialty programs, job searches, and networking opportunities. To date, over 200 students have signed up with over 80 mentors.

As your Alumni Association President, I have been asked to help organize Temple's first annual **Global Day of Service on Saturday, November 9, 2013**. Global Day of Service is designed to unite Temple alumni and friends worldwide in community service on a single day. On November 9th, a dental phone-a-thon will be held at the KSOD, reaching out to fellow alumni, with the goal of raising funds for needy patients unable to pay for advanced services at the school (e.g., periodontal and dental implant therapy and prosthetic reconstruction).

The Alumni Association serves as a liaison to improve communication between the dental school and its

alumni and to foster positive relationships among administration, faculty, alumni and students. Alumni reconnect with the school and each other at programs and social events organized by the Alumni Association. Additionally, the Dental Alumni Association supports and provides social



and professional opportunities for today's dental students through a number of worthwhile student activities such as the freshmen bbq, white coat ceremony, mentoring programs, international outreach programs, alumni golf outings, and hospitality suites for student examinations. This is only made possible with your financial support.

**Our Dean, Dr. Amid Ismail, is transforming our school, moving forward with a strategic vision and unwavering commitment to create a true patient-centered and comprehensive dentistry model, one that honors the experience of our alumni and creates the most advanced and comprehensive learning experience to educate dentists for the next century.** With your help, we can preserve the great traditions of Temple University's Kornberg School of Dentistry and ensure its future development and growth.

Remember, all alumni receive a discount on Continuing Education classes. Visit <http://dentistry.temple.edu/alumni> to view upcoming CE programs and alumni events.

With sincere best wishes,

Robert A. Levine, DDS, FCPP, Class of 1981  
 President, KSOD Alumni Association  
 Clinical Professor in the Department of Periodontology  
 and Oral Implantology  
 Temple University Kornberg School of Dentistry

## ALUMNI ASSOCIATION BEGINS “Mentoring for Life” PROGRAM

The Kornberg School of Dentistry’s Alumni Association recently partnered with the school to begin the new “Mentoring for Life” Program, in which students would be paired with alumni mentors in the surrounding Philadelphia area. The idea, first originated by Alumni Association President Dr. Bob Levine, was to have each freshman student paired with an alumnus who had been through the same experience the student had gone through. The mentor’s responsibility would be to guide the student from year to year, helping them transition from those tough didactic basic science courses, encouraging them along the way, and into the rigorous clinical assignments. Eventually, the student would come to the mentor for advice on GPRs, job interviews and postgraduate work. The whole idea is for the mentor and student to share a bond throughout their professional careers.

In the beginning, the “Mentoring for Life” program’s goals were somewhat limited; the goal was to match freshmen with willing alumni mentors in the area. However, after members from the Alumni Association spoke with students about the program, the association soon came to notice that there was a need for mentors not only in the freshmen class, but for all classes. A registration web page for mentors and students was created and over 200



students signed up with around 80 mentors in the area participating. Because of the overwhelming participation of students, the Alumni Association decided to pair various students with each mentor so the students could also mentor each other, much like a learning community. For example, a senior and junior might be paired with the same mentor allowing the junior to benefit from having a senior mentor and an alumni mentor. The registration page also allowed students to make specific requests for mentors, based on specialty practice, geographic area and whether they practiced dentistry as an active duty officer in the military.

During the course of the mentoring program, students and mentors will be asked to meet at the school at the beginning of the

year to go over the details and benefits of the program while introducing the students to their mentors, and also at the end of the year to wrap up the year and share experiences. Throughout the year, the mentors and students will meet at their own mutually agreed-upon times.

If you are interested in becoming an alumni mentor for the 2014-2015 school year, please visit <http://dentistry.temple.edu/mentoring> for more information.

## MORE THAN JUST DENTISTRY

### JUDEE HASHEM-RAPOZA, DMD

#### The patient-centric approach

Judee Hashem-Rapoza, DMD, Class of 1990, whose general dentistry practice in Plymouth Meeting, Pa, promotes overall health and wellness, thrives on this very simple notion.

"It is my practice to treat the patients as human beings first, through caring and listening," she says.

The guiding philosophy of Dr. Judee's alternative dentistry is that the health of the mouth and the body are one and the same. According to Dr. Judee, as she is called by her patients, oral health is a vital component of the "whole body" and optimum health. Dr. Judee's practice takes into consideration the cause-and-effect relationship between a patient's oral health and the health of the rest of the patient's body—for example, the well-documented link between periodontal disease and heart disease.

Dr. Judee achieves her mission by employing a patient-centric practice that fosters trust and open dialogue. "People are anxious about going to the dentist for different reasons, including worrying about the effectiveness of localized anesthetic and feeling that the dentist is rushed or is neglecting their concerns," she says. "Other factors include anticipation of pain, negative past experiences and even the sterile smell of the dental office. Interrupting the normal day's routine to visit the dentist also is a factor in general anxiety.

#### Together as a team

Dr. Judee opened her practice in 1992 with one chair and 10 patients. Today, her practice is a tremendous success with over 6,000 patients and a staff of four that shares her whole-patient philosophy.

"We work together as a team," she says. "It is our goal to make sure every patient has a positive experience. My staff and I are down to earth and really focus on our patients and their lives. We need to make sure they feel comfortable, so we tend to their physical and emotional needs."



*Dr. Judee Hashem-Rapoza (center) with her daughters Madeline (left) and Liza (right).*

Indeed, studies have shown that the most important factor in overcoming dental anxiety is good dentist-patient communication.

"If I had the opportunity to convey one message to the new students entering the profession of dentistry, I would tell them that they are caring for human beings who have emotions and fears," she says. "Our job is to find out what they fear and talk to them about it and ease their anxieties."

Dr. Judee also emphasizes patient trust at her practice. She places value in the word, making sure that every patient feels confident that she always has their best interest at heart. "Patient trust is of utmost importance to me and ultimately results in patient satisfaction. Trust is the foundation of a successful patient-dentist relationship, as with all other relationships."

More than anything, Dr. Judee sees herself as a healthcare professional who takes pride in her profession. "I am not a salesperson," she notes. "My mission is to provide outstanding care to each patient as it pertains to their individual health, age, chief complaints, and diagnosed pathologies all while considering their budget."

Dr. Judee adds, "I love what I do. Caring for human beings is very natural to me. It's simple, I LOVE PEOPLE. I enjoy going to work every day."



# The Shore Family

"SHORELY" PROUD OF DENTISTRY

The Shore legacy at Kornberg School of Dentistry began with a cousin graduating from the school in 1930. The tradition continued year after year, captivating generation after generation of the family, with nearly 20 relatives who have been Temple-trained dentists and hygienists. Dr. Joseph Shore, the founder of the Shore-Snyder Dental Center in Norwood, Pa., grew up in the Strawberry Mansion section of Philadelphia and ultimately settled in Haverford with his wife, Bette Mandel Shore.

The Shore-Snyder Dental Center truly is a family affair. Bette served as the practice's book-keeper from when Joseph first opened in 1952 until last year. Joseph was joined by his brother, Leon, who passed away in 1983, and eventually by his son, Jeffrey, in 1979. Joseph's grandson, Andrew, now works with his father and grandfather, and the practice recently welcomed Robin, Joseph's granddaughter, after her Kornberg graduation this past May.



Three generations: Andrew, Robin, Joseph, and Jeffrey at Robin's 2013 graduation ceremony.

## The Patriarch

Joseph practiced dentistry for over 62 years and retired only one year ago. While he has many fond memories and reasons to thank Temple School of Dentistry (it was renamed Kornberg School of Dentistry years after Joseph earned his degree), he was not always on the path to becoming a dentist. Originally, Joseph planned to become an accountant. However, he received a letter from his cousin during WWII which convinced him otherwise. Joseph hasn't looked back since, and recently published his autobiography.

Joseph credits Temple with preparing him to dive headfirst into opening his own private dental practice immediately after graduating. He felt completely comfortable performing all of the dental procedures he

learned during his time as a student. Joseph believes Temple is such a wonderful place because of its faculty. He remembers his instructors taking the time to assist and invest in him and his classmates, truly making sure they understood the material. He acknowledges that "they were tough on us...I went to bat for my fellow students because I was way ahead of them in my requirements and they respected me. Many of the instructors would hang around my area, and they would talk to me." While Joseph recognizes how helpful he was to his peers, he identifies them as one of his favorite aspects of his time in dental school.

Joseph points out that much has changed in dentistry since he first entered the field. He explains that while most of today's dentists practice in group settings, this was not the case years ago. He



In 2010, Andrew received his diploma from his father and grandfather.

feels that “it makes a big difference starting in a group practice, learning various techniques from each other, giving you more confidence.” Joseph also shares the changes that have evolved in patients themselves. “Patients are no longer afraid of dentistry. They know that dentistry is not going to kill them. Many want to come in to have their teeth cleaned more often than every six months.” He goes on to explain that the Shore dentists try to help parents teach their children that dentistry can be fun and is not painful; they even let young patients squirt the water hose into their parents’ mouths.

As can be expected based on Joseph’s generosity toward his classmates, he was equally generous, if not more so, to future Temple students; he volunteered and taught in the school for 10 years. Joseph was extremely involved in the dental fraternity Sigma Epsilon Delta (SED). He served as president as a student, went on to become president of the Philadelphia chapter and was eventually elected president of the national brotherhood. SED began a Cleft Palate Clinic in Israel which services Israeli and Arab children.

It was Joseph’s happiness practicing and teaching that became apparent to Jeff and showed him what a wonderful career dentistry could be. Joseph feels extremely fortunate to have his progeny working with him and admits he



*The 2012 Temple dental mission group in Samana, Dominican Republic.*

becomes teary thinking about having his son and grandchildren in the practice.

### **The Middle Generation**

Dr. Jeffrey Shore followed in his father’s footsteps not only in becoming a passionate dentist, but also by returning to Kornberg to teach future dentists. He shares: “Besides being able to watch both my children progress through four years each at Kornberg, teaching has been one of the most rewarding experiences of my life. Showing students ways to approach problems they might encounter in practice and seeing their interest in learning is truly rewarding.”

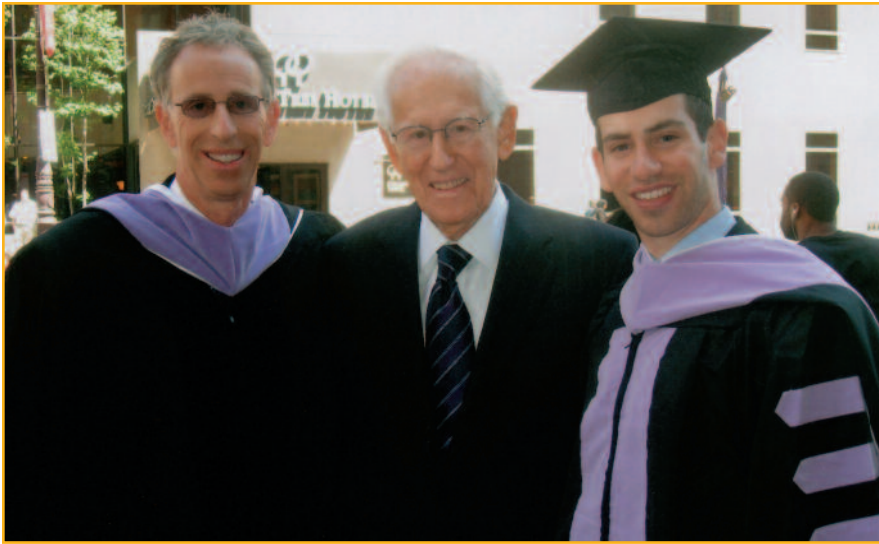
It is instructors like Jeff who help make a Kornberg dental education so outstanding. “With both full-time and adjunct professors employed, the students can see and learn methods used both in school and in real environments outside the classroom.”

Jeff identifies both his social and clinical experiences as two high-

lights of his time at Kornberg. By living on campus, he formed bonds with classmates, many of whom he still sees at reunions and is in touch with today. In explaining the excellence of the Temple program, Jeff elaborates: “With a wide range of patients to draw from and being a clinically oriented school, the opportunity of experiencing patients who required simple to complex needs was afforded to me.”

In addition to practicing and teaching dentistry, Jeff leads a dental mission to the Dominican Republic. Through this program, six or seven fourth-year Kornberg dental students travel to the Dominican Republic for a week and provide free surgical and restorative dental care. Both Andy and Robin participated in the mission during their fourth years. Jeff also serves on the dental assisting advisory board at Marple Newtown High School.

When asked what he would impart to future dentists, Jeff



Adjunct professor Dr. Jeffrey Shore, with father, Joseph, and graduating son, Andrew.

shares: "Dentistry is an occupation that they will enjoy forever, whether they have their own practice or work for someone. It is a rewarding career." This is clearly something that Joseph has demonstrated and that Andy and Robin have recognized.

### The Young Dentist

Dr. Andrew Shore can't choose just one highlight from his years at Kornberg. First and foremost, he identifies learning under his father during the first year of clinic as one of his greatest memories. He also recalls how amazing it felt the first time he completed difficult procedures (such as a full-mouth extraction with immediate denture placement), placing multiple three-unit bridges, and finishing a molar root canal. Last but not least, graduation, the culmination of his years and lessons, stands out among the many treasured times.

Andy shares that Kornberg is such a special, strong program because of the way it prepares students to diagnose and treat cases effectively. He was highly impressed with how ready and confident he felt working with patients so soon

after graduating. He further states, "It's the students' clinical experience and ability to use those methods that make the school so well respected." Andy's education was so stellar that he credits the actual learning of his "forever craft" as the most enjoyable part of his four years.

While Andy did not originally intend to become a dentist (he was a business major as an undergraduate and changed his course when the economy declined), he is clearly happy with his career choice and subscribes to his father's earlier message as he shares: "According to many news outlets, being a dentist is the number one profession, and I'd agree with that. I'm grateful for the knowledge I received at Kornberg—it was invaluable."

### The Newest Dentist

Unlike her grandfather and brother, Dr. Robin Shore knew early on that she wanted to work in the medical field. Her exposure to dentistry from so many family members gave her the confidence that she would enjoy practicing. The closeness of her family was also appealing as she explains: "I

loved that my dad and grandfather worked alongside each other and built a stronger relationship because of it. I wanted to be able to experience that with my dad and brother." She was excited to join the family's practice so she could make her grandfather proud.

Like her grandfather, father and brother, Robin recognizes how wonderful the faculty and students at Kornberg are. She explains that her instructors were always available to help and fully understand the hardships of being a dental student. She describes her classmates as being down-to-earth but enjoying life outside the classroom. "Overall, everyone at Kornberg truly cares about one another."

Robin's classmates enter the picture again when she describes the highlights of her years at Korn-



When not practicing, the Shores are diehard Eagles fans.

berg. She recalls celebrating finishing boards, participating in sports leagues and taking part in the Dominican Republic mission.

Similar to Andy's praise of the school's education, Robin feels prepared to act quickly and appropriately in difficult dental situations. "Besides the spectacular, supportive faculty, I credit the quality of my experience to the school's requirements and population of Temple patients. Kornberg produces the best general dentists in the area, possibly even the country."

As indicated when she shared memories of her dental school experience, Robin was highly involved in student life. She was elected secretary of her class during her fourth year, was president of the Dominican Republic Outreach Club, served as social chair and president of the American Association of Women Dentists and was an honor board member for two years. Most recently, Robin was selected as a member of Omicron Kappa Upsilon, the national dental honor society. Only 10 members are chosen from each class; this is considered by some as the highest honor for a student.

It is clear that Robin is a people person, so it comes as no surprise that she has decided to pursue general dentistry because of "the ability to build relationships with patients over a long period of time."

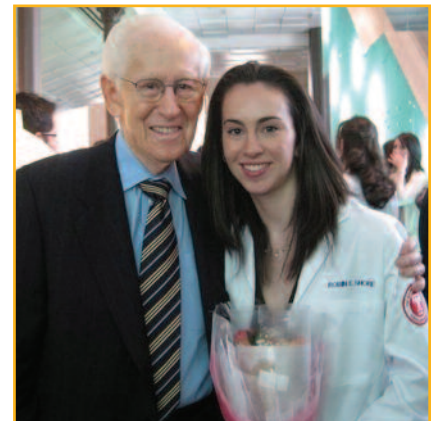
### Family Pride

If it isn't apparent from the practice's composition, the Shore family likes spending time together. They are an athletic bunch of avid Philadelphia sports fans (primarily Eagles and Flyers) and have held Eagles season tickets for decades. When the family isn't practicing dentistry, giving back to the community or cheering on Philadelphia teams, they turn their attention to animals. In the last 23 years, they have rescued six greyhounds and currently care for Chloe and Casey.

Similar themes arise when Joseph, Jeff, Andy and Robin talk about their dental school memories and views of why a Temple dental education is so superior. They have each made the most of their time in the program, both as students and as faculty, gleaning excellent experiences. It is no wonder they

all take so much pride in being a part of the school and the Shore dental legacy.

The Shore family is proud to have so many Temple-educated dentists in its ranks, and they are equally proud to have created such a strong family practice. They are truly bonded.



Joseph and Robin at Robin's White Coat Ceremony.



Andrew, Jeffrey, Bette, and Joseph at Andrew's White Coat Ceremony.

# Remembering Joan Ballots

Dental School and University Supporter



*Generous philanthropist, university trustee and outstanding alumna Joan Ballots died last December after a long illness.*

Tilghman Moyer, Temple's interim senior vice president for institutional advancement, reflects on the first occasion that he spent time with Joan Ballots. Passionate about any team that wore the Owls uniform, especially on the basketball court, Ballots had traveled to South Carolina for the first-ever Charleston Classic. The year was 2008, and the men lost to Clemson. But what Moyer fondly remembers is being part of a golf foursome with Ballots. They played two rounds on one of Kiawah Island's championship courses, enough time to get to know each other. Although Ballots' reputation as a legendary Temple supporter and alumna had preceded her, Moyer was drawn to her "incredible passion and belief in the university."

Last December, Temple lost this trustee, donor and enthusiastic sports fan when Ballots died after a long illness. "She's missed by lots of people," emphasizes Moyer.

Her affection for the school was in her family's blood, she once said in an interview. In the 1890s, her grandfather took classes from Russell Conwell, Temple's founder and first president. Then her father attended Temple before entering medical school. Even her late husband, John, '57, whom she met while both were counselors at a summer basketball program of the university's coach, Harry Litwack, went to Temple, graduating from the Dental School.

Ballots' student days were marked with achievements: involvement with student government, playing on four varsity teams and recognition as an outstanding senior. After graduation, she took her degree in education and moved to New Canaan, Conn., where she became a middle school teacher and coach while John started a dental practice. "His practice was a significant part of their lives," points out Moyer. "It was in their home, and she was involved with the business as record keeper and business manager."

However, she remained involved with the university. She and her husband quietly provided scholarship dollars for students of the Dental School, because they believed in the vital importance of making financial aid available. In recognition, a dental preclinical lab was named after them in 2006.

After her husband's death in 1990, Ballots expanded her leadership. "I've seen what good schools can do," she's reported as saying. So she helped underwrite efforts to build partnerships with schools in the Temple community. She also served on the Dental School's Board of Visitors, a role she highly valued because of John's great appreciation for his dental education. She became a member of the university's Board of Trustees,

serving on many committees, including searches for two former presidents. For the Urology Department, which treated her husband, she offered additional support.

Athletic programs, always close to her heart, benefited too from her philanthropy. The woman who maintained a Philadelphia residence just so she could attend every basketball (and football) home game supported coaching positions for men's and women's basketball. Then she stepped forward for many capital projects,

such as construction of the Liacouras Center and the women's basketball court.

But it's her presence at the games that will be missed as much as her advocacy. "You always knew she'd be there," says Moyer, "truly bleeding cherry and white, touching generations of student athletes."

As serious about making a difference in the classroom as on the court, Ballots was "a fixture at the university

for decades," noted Acting President Richard Englert upon her death. "Joan has always been concerned about our tremendous students and was never happier than when she was in their company."

Board of Trustees Chair Patrick O'Connor added:

"I've worked with Joan for many years and will miss her passionate participation at our board meetings and her love of Temple."

"It was always about the students, the programs, the athletes and the university," remembers Moyer, "not about Joan. She was selfless in her dedication."

For that loyalty, in 1989 she received the F. Eugene Dixon, Jr. Inspiration Award. It was an honor of which she was especially proud.

**"In my mind, she was a pioneering woman. For years, she was one of only a few female leaders the university had. She spoke her mind, and for someone who came from a generation that didn't fully value the contributions of women outside the home, that was unusual. But she never wore it on her sleeve."**

Tilghman Moyer, interim senior vice president  
for institutional advancement

## In Memoriam

Mrs. Joan Ballots

Dr. Edward Flood '51

Dr. James R. Lynch '81

Dr. Sidney R. Bridges '48

Dr. Joseph Gaudel '46

Dr. Heather M. Raymond '00

Dr. Leonard Cohen '54

Dr. Roy A. Himelfarb '73

Dr. Michael C. Ritter '70

Dr. Philip Corn '48

Dr. Clinton Hoffman '53

Dr. John L. Salines '47

Dr. Raymond L. Detz '54

Dr. John L. Kallaway '55

Dr. Ernest Schwartz '64

Dr. C. Douglas Ebing '55

Dr. Edmand H. Lange '49

Dr. David Wagner '48

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Dr. Stanton Braid and  
Dr. Allen F. Fielding

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*Dental Management of  
Emergencies and  
Medically Compromised  
Patients*

Dr. Gary Jones and  
Dr. Allen F. Fielding

**Fri., Mar. 21, 2014**

*2nd Annual Engine  
Driven Instrumentation  
in Endodontics – Panel  
Discussion*

Moderator: Dr. Cemil  
Yesilsoy

Speakers: Dr. Chris Glass,  
Dr. Eric Herbranson and  
Dr. Martin Trope

**Wed., Apr. 2, 2014**

*Updates in Pediatric  
Dentistry: Treating Tiny  
Tots to Teens*

Dr. Lance Kisby

**Fri., Apr. 18, 2014**

*Feel Good Dentistry –  
A Sane Approach to  
Esthetic Dentistry*

Dr. Steven Weinberg

**Fri., May 16, 2014**

*Limiting Exposure in the  
21st Century Dental  
Practice*

Dr. Michael Ragan



### DO YOU HAVE A STORY TO SHARE?

We are looking for alumni to interview for the next *Diamond's* Alumni Spotlights and we would love to hear from you. Please contact Editor Ashley LaRosa at 215.707.9005 or [alarosa@dental.temple.edu](mailto:alarosa@dental.temple.edu).

 Kornberg School of Dentistry  
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3223 North Broad Street  
Philadelphia, PA 19140  
<http://dentistry.temple.edu>

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**Dean**  
Amid I. Ismail

**Director, Development**  
Jennifer Jordan

**Editor**  
Ashley LaRosa

**Contributing Writers**  
Kyle Bagenstose  
Meg Cave  
Leslie Feldman  
Jessica Lawlor

**Design**  
Cynergy Integrated  
Cynthia Busbee  
Janice Ellsworth

**Photography**  
Ryan Brandenburg  
Joseph Labolito





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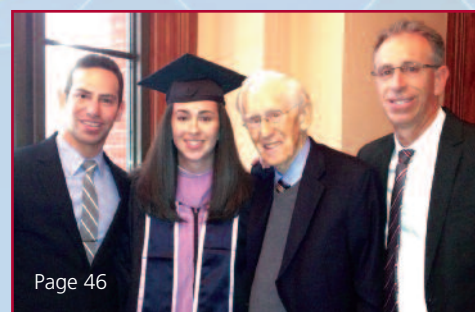


# DIAMOND

Maurice H. Kornberg School of Dentistry Magazine | Fall 2013

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The Next  
**150** years

Over the last 150 years, the Philadelphia Dental College, the Temple University School of Dentistry and now the Maurice H. Kornberg School of Dentistry have experienced, undergone, suffered, and exuberantly witnessed wars, tragedies, triumphs, economic developments, emergence of new economies and the disappearance of countries and cultures. In all of these events, our dental school has continued to educate dentists (and for several decades, dental hygienists) every year. The school thrived in perhaps the best 150 years in human history, especially for the United States. I can only contemplate what we see today, for predicting what will happen in the future is beyond the bandwidth of any human. We cannot envision that far but we can plant seeds that will help those who follow us.

In this issue of *Diamond*, two prominent dental leaders share their predictions for our profession from the perspectives of academia, private practice, and policy. They are well known nationally and to our alumni. One shares his cautious pessimism about the future of the profession, while the other is excited about the future. I can attest to you without hesitation that in the year 2280 their predictions will be proven wrong because the future cannot be predicted with the limited information we currently have.

Today we face major challenges in dental education. Institutions face a high level of competition for faculty who are clinically proficient in all aspects of general dentistry. This situation was not caused by recent decisions, but by decades of shifts in funding for higher education to students, growth in the income of dentists (which is wonderful), and misguided funding strategies that shifted research, and hence training funds, away from dental schools to medical and other schools in universities. Our current system of dental and higher education in the U.S. operates in individual islands that address local markets or segments of markets. The opening of for-profit dental schools in osteopathic medical schools which, like the majority of other dental schools, are focused on clinical education and on meeting the basic standards for accreditation, are threats that will haunt the status of our profession, and hereafter, our dental school over the next decade.

We have prepared, and are preparing, ourselves for this new world. After five years of planning and execution of critical decisions to increase the funding base for the school and renovating our facilities, we are now competing for the best students who are choosing our dental school even when they are



Amid I. Ismail  
Dean and Laura H.  
Carnell Professor  
BDS, MPH, MBA, DrPH,  
Diplomate ABDPH

*“Today we face major challenges in dental education. Institutions face a high level of competition for faculty who are clinically proficient in all aspects of general dentistry.”*

— Dean Amid I. Ismail

*“We are building and will continue to build our research capacity in areas that have direct impact on oral health and future management of dental and oral diseases. These changes did not happen because of administrative fiat but rather through the careful strategic positioning of the school built on the support of students, staff, faculty and alumni.”*

— Dean Amid I. Ismail

given the choice to attend various other schools. Our average grade point average (GPA) and Dental Aptitude Test (DAT) scores are now above the national average. Our clinics are evolving to become care centers where more and more patients will seek care and, hence, provide our students with opportunities to graduate with excellent

clinical skills. We are building and will continue to build our research capacity in areas that have direct impact on oral health and future management of dental and oral diseases. These changes did not happen because of administrative fiat but rather through the careful strategic positioning of the school built on the support of students, staff, faculty and alumni.

Positive change does not just happen, it is created by individuals, groups, other leaders or nature. Finding those leaders who will build the future to become better than today is the main challenge for our country, states, cities and school. The future will not be shaped by managers who do excellent daily tasks but by those who can envision the future, select the right targets at the precise time, and convince others to lead the way to reach these targets. Selecting the right target is the core competence of leadership.

Temple University dental school is at that precise moment in its long history to move on a path to reach its destiny. We will remain a center for excellence in clinical care and education of dentists for the 22nd century that is not only based on developing advanced clinical skills but on science and, most importantly, professional ethical standards. Please join me in helping us achieve this target; become a leader and steward of the future of this boundless dental school.

## “It All Depends on You!”



**Michael C. Alfano, DMD, PhD**  
Professor & Senior Presidential Fellow  
Executive Vice President Emeritus  
New York University

In the joyful spirit of the 150th Anniversary of the founding of the Kornberg School of Dentistry at Temple University, this article should strike an appropriately high-minded, upbeat tone to match the occasion. Indeed, on several past occasions I have had the wonderful opportunity to speculate about the amazing advances that science and engineering will bring to an ever brighter future for the dental profession. However, on this occasion, Dean Ismail asked for a “pull-no-punches” assessment of where the profession seems likely to be headed, so here is my take on what the dental profession may look like in a couple of decades, especially if dentistry in the United States continues to be dominated by the bastions of the status quo such as the ADA House of Delegates, among others. That said, let me quickly point out that these are my views, not those of Dean Ismail.

**M**y pessimism about the future of dentistry is driven by the profession's continuing resistance to changes in the delivery model for dental services. Such resistance is certainly not a new phenomenon. In 1910, the dentists in Ohio successfully campaigned to close the very first school of dental hygiene on the basis that the graduates would not be as well qualified to perform hygiene services as dentists. Yet, if we fast-forward to the beginning of the 21st century, there are now hundreds of dental hygiene educational programs and ALL parties are well served by the birth of the dental hygiene profession. The public can receive important services from hygienists at fees that are lower than what they would be if provided by a dentist; the dentist is well served by being able to focus his/her time on more complex procedures with associated increased fulfillment and enhanced practice revenue; and dental hygienists themselves are well served by the opportunities for meaningful careers in healthcare. Thus, the reader should be wary that repression of new ideas in support of the status quo with its established dental practice revenue models often masquerades as a genuine concern for the well-being of the public. Indeed, not every new idea for change in healthcare delivery is worthy of implementation. Yet, any thoughtful layperson can see through a thinly veneered rhetoric about quality of care to recognize that the perceived economic interests of the dental profession are also driving recalcitrance to change.

History repeats itself. In my 40-plus-year career, I have seen substantial initial resistance by the profession to such reforms as expanded-function dental assistants, routine glove wearing, Medicare, and mercury hygiene, among many others. The newest wave of resistance has been launched in opposition to the efforts in several states to approve a type of oral health-care practitioner commonly known as either a mid-level practitioner or a dental therapist. Two states now allow such practitioners—Alaska and Minnesota—and several others are considering the approval of such practitioners, but 'organized

dentistry' always mounts strong opposition. The current position on mid-levels is particularly worrisome because organized dentistry is not only opposed to the licensure of such practitioners, it is opposed even to the study of how such professionals might serve the public and enhance dental practice. I therefore submit that this extreme position of not wanting to know if such mid-level providers can be helpful or not is no longer simply supporting the status quo, it is an anti-intellectual position unworthy of a science-based profession that rose to university status more than a century ago. Moreover, unlike the past examples listed above wherein the profession eventually reversed itself, today's 'status quotians' could be placing the profession on the precipice of a decline that may not be reversible, as I will explain later.

By now you must be thinking that I am firmly ensconced in the belief that the creation of a mid-level practitioner in oral health will be both the answer to the access-to-oral-care problem and a successful vector in mitigating the rise in oral health-care costs in the country. Not true. While I believe the large database from other countries, and the early results from both Alaska and Minnesota, demonstrates clearly that mid-levels can safely deliver high quality oral health services, I do not know if the trilevel U.S. payment system—a combination of self-pay, private insurance and public programs—will support such a provider model adequately. Also, I do not know if the creation of such a new type of practitioner will result in the deployment of these practitioners in a manner that will increase access to care. Moreover, neither Alaska

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— Michael C. Alfano

nor Minnesota constitutes an ideal place to study these unknowns. In the case of Alaska, the dental therapists are deployed primarily in remote villages with the partial economic support of Native American tribes. In contrast, while the Minnesota model can be evaluated in the more traditional tri-payer system, the level of training for a mid-level dental practitioner in that state can be as long as six years, thereby creating a health practitioner with the number of years in training, and presumably compensation, approaching that of a dentist. As more states wrestle this matter to a conclusion, we are at risk of creating an oral care delivery model that will vary by state, type of mid-level training required, disparate scopes of practice, and variable to no supervision, including the establishment of mid-level oral care offices with absolutely no linkages to a dentist, the most dangerous outcome of all.

I submit to you that this is the course we are on over the next 20 years. I predict that the anti-intellectual forces will prevail in some states, not others. I foresee a future whereby no one is well served. The public will become confused about what services are available from a dental therapist vs. a dentist vs. a dental hygienist. Dental therapists will practice with the moral hazard that they might be inclined to fit a patient who is best treated by four implants and an overdenture, with a full non-implant supported denture simply because they might be licensed to make a denture but not to place an implant. Amidst this confusion, the esteem of the dental profession will surely decline as many patients in need of 'routine' care will migrate to the dental therapist who will likely charge lower fees for comparable services. Such patients may never avail themselves of the diagnostic acumen or complete range of services offered by a dentist because they habitually seek care from a dental therapist. Ultimately, this scatter-shot 'system' of dental care will create biases and broken trusts from which there can be no recovery.

Instead of fighting every effort to explore the potential of adding a new type of dental practitioner

to the oral health team, the dental profession should be allowing this evaluation to occur, and if it turns out that mid-levels can make valuable contributions in the United

States, the profession should embrace their licensure and work to ensure that the professionals are linked to the rest of the oral care team and deployed in ways which enhance the access to care and oral health of the public. In this manner, much like the lesson learned from dental hygiene more than 100 years ago, the public will be well served with more access at lower costs and the profession will continue to grow in esteem and to prosper economically.

To paraphrase a former dean of the Harvard School of Dental Medicine:

"Dentists are the most over-educated professionals for what they do, and they are the most under-trained for what they should be doing."

Perhaps the dental alumni of the distinguished school of dentistry at Temple University can commit to begin to change this. Perhaps they can begin to acknowledge that their best value to society is in accurately diagnosing the many oral diseases and oral manifestations of systemic disease, treatment planning complex patient needs with the most appropriate services available, performing complex surgical services, managing collapsed occlusions, using pharmacotherapy prudently, and supervising a first-rate team of colleagues, each with high skills in more narrow aspects of oral care. Perhaps the future of the profession can be bright, but it all depends on you!

*"The public will be well served with more access at lower costs and the profession will continue to grow in esteem and to prosper economically."*

— Michael C. Alfano

WHERE ARE WE GOING IN DENTISTRY?



**Howard Bailit, DMD, PhD**  
Professor Emeritus  
University of Connecticut

This paper examines trends that are likely to drive changes in dental education and practice and determine the future of the profession. The major drivers of change are the prevalence of oral diseases, innovations in science and technology, and market forces. The paper focuses on shorter-term issues (e.g., 10 to 20 years). The long-term future of the profession depends on how these issues are resolved.

# Trends

## Oral Disease

The United States and many other developed countries are experiencing major improvements in oral health. As a result of community water fluoridation, preventive services provided by dentists (e.g., sealants), and better personal preventive behaviors, there has been a dramatic decline in the incidence of caries and the prevalence of untreated dental decay. This trend has affected all income and education groups and is certain to continue. Older cohorts (e.g., above 65 years of age) who did not have the full benefits of fluoride are declining in numbers. Younger cohorts have much less disease.

Not only is the population getting healthier, but most untreated disease is concentrated in lower income groups. This is not because the incidence of caries is that much higher in this segment of

the population. Rather, it is the result of large disparities in financial access to care. The fact is that the lower income population (ca. 100 million people) has the highest prevalence of untreated tooth decay but accounts for less than 20 percent of dental expenditures. In contrast, people in the upper third of the income distribution have relatively little untreated disease but account for 53 percent of expenditures. In other words, the population that has the resources to pay for dental services is in excellent oral health. The population that has most untreated disease cannot afford to pay for private sector dental services, and public programs for the poor have significant limitations (i.e., Medicaid, safety net clinics). These trends have major implications for private dental practice. Namely, the effective demand for restorative care, the financial mainstay of most general practices, is declining. In 1959, 42 percent of general practitioner (GP) services were restorations and in

2005, 12 percent. In the future, restorations are likely to account for an even smaller percentage of GP dental services.

While there are other oral diseases that require treatment, and more elderly are dentate and visiting dentists, these are not substitutes for fewer restorations. As restorative care declines, dentists are becoming more dependent financially on diagnostic and preventive services. Prosthetics and specialty services remain a relatively small and declining component of the average general dental practice.

It is important to recognize that the current dental education and delivery systems were organized to provide care to a population where tooth decay was rampant. This is no longer the case, and the trends are clear—less tooth decay and especially among upper income groups. This raises a basic question: How many dentists are needed in the future to meet the



effective demand (in contrast to need) for dental care?

### Science and Technology

No one person can predict the scientific developments in each major area of biomedical research that will impact the future practice of dentistry. It is possible to make some general predictions. First, the billions of dollars spent each year on biomedical and technology research by governments and private industry in developed countries will lead to more effective diagnostic, preventive and treatment methods. This will result in new and improved community and practice level preventive methods that will further reduce the incidence of caries and periodontal disease. More treatments will be available that do not require doctoral level training and

can be delegated to auxiliary personnel (e.g., Atraumatic Restorative Treatment). At the same time, some new treatments will require advanced scientific training (e.g., stem cell-derived tooth transplants).

Second, research on basic disease processes will result in the closer integration of dental and medical care. The relationship between periodontal disease and a host of systemic medical conditions has received a great deal of attention (e.g., type II diabetes). Less well known is the impact of medical treatments on oral physiology (e.g., salivary flow) and diseases (e.g., xerostomia and caries). This is a growing problem as the population ages and takes more medications. Finally, it is likely that some new therapies to prevent

and treat oral diseases will involve the use of medications that have systemic side effects. Thus, both dentists and physicians will need to have a greater appreciation and understanding of the basic pathophysiology and treatment of conditions that have both oral and systemic manifestations. Overall, advances in biomedical and technology research will lead to significant further improvements in oral health. Dentists will need a greater understanding of human biology and the clinical (dental and medical) sciences to use these advanced therapies and to interact effectively with other health professionals.

### Delivery System

The dental care delivery system evolved over the past 200 years in response to local market forces.





While these market forces are never static, they are now in a period of relatively rapid change. This review examines one important area of change, the formation of group practices.

Until recently, the dominant practice model was independent solo dentists. Ten years ago, they represented almost 85 percent of private practicing dentists. Solo practices dominated, because they were able to deliver care just as efficiently as group practices. Over the past 20 years, solo practices did increase in size (i.e., operatories, staff and equipment). In part, this resulted from healthier patients who primarily needed diagnostic and preventive services which, in large part, were delegated to dental hygienists. Dentists also employed more dental

assistants and administrative staff to increase practice efficiency. Now, the number of group practices is increasing and solo practices decreasing. The reasons for this change are not fully understood but are probably related to practice efficiencies related to larger size. Examples include increases in the size and complexity of practice staff, greater use of expensive technology, and better access to the capital needed to construct, equip and operate dental offices. Another group practice advantage is the availability of more dental graduates who have substantial educational debt and are unable to purchase their own practices.

Many groups are made up of about five offices with two to five dentists per office. At this time,

there are not many practices with 20 or more dentists in the same location. Likewise, most group practices are not part of larger integrated medical care systems. It is still unclear who owns these new group practices: dentists, corporations or others.

In 10 years, group practices will become a significant component of the dental delivery system in many markets, and they will employ thousands of dentists. This is a major change from the current dental care system, but it is essentially the same delivery model that now exists in medicine.

As these groups begin to exert their influence at the local market level, they are likely to come into conflict with solo practitioners. This is because of different finan-

cial incentives. For example, group practices are much better positioned to gain from the employment of dental therapists than solo dentists. Likewise, group practice companies will want larger organizations to buy them and may advocate for changes in dental practice acts to permit non-dentist ownership of dental practices.

It is also reasonable to predict that some group practices will try to contract directly with employers to deliver care to employees and dependents. This will put them in competition with insurers. A major unresolved issue is the interest of large medical care systems (e.g., Accountable Care Organizations) in owning and operating dental practices. To date, this does not appear to be the case, but it is too early to predict how medical care systems will develop vis-à-vis dentistry.

### **Implications**

So, what impact will the changes just described in oral health, the biomedical sciences, and market forces have on dental education and practice? It is perilous to make predictions, because many changes will take place over the next 25 or more years that cannot be predicted. With this in mind, here are few cautious remarks:

### **Dental Education**

Dental schools are facing major challenges because public support is declining and educational debt may soon reach unsustainable levels. At the same time, the number

of schools and graduates is increasing rapidly, but the demand for dental care is decreasing. Other professions, such as law and veterinary medicine have recently faced similar challenges, and they experienced dramatic declines in applicants. This may well occur in dentistry, as dental graduates find it increasingly difficult to pay back hundreds of thousands of dollars in educational debt.

If this does happen, will most dental schools survive by downsizing and operating more efficiently or will many be forced to close? Unfortunately, based on a similar supply and demand imbalance in the 1980s, the latter outcome is most likely. This will be a difficult period for the dental education community, and it will lead to some basic questions being asked:

- How many dentists are needed to provide care to an increasingly healthy population? While it is true that a large percentage of the American people do not have adequate access to dental care, this is not because there are too few dentists. The access problem will not be solved until American taxpayers decide to provide the poor adequate public dental insurance.
- What is the appropriate level of dental school training in the biomedical and clinical dental and medical sciences? Research in the biomedical sciences will produce new therapies that require a strong science background, and more patients will

have related oral and systemic diseases.

- Should graduates be required to spend another two or three years in residency training, so they are well trained to provide most dental services and to work efficiently with a full array of clinical and administrative staff and advanced technology?
- Should the education of dentists and physicians be more closely integrated? Clearly, it is going to be very difficult to operate small dental schools efficiently and still provide students a high-quality education. Closer integration with medical schools may offer major operating efficiencies.
- Is dentistry a learned profession (e.g., law, medicine) or a doctoral level technical occupation (e.g., optometry)? If the former, the education of dentists must be based in research-intensive universities, and dental schools have to provide faculty the time and resources necessary to compete successfully for research grants and generate new knowledge.

### **Practice**

Dentists also face serious challenges. At the national level dental utilization rates and per person expenditures began to decline five years before the 2007/08 economic recession, and these declines are reflected in lower practitioner incomes. At the same time, dentists are faced with a rapid increase in the supply of dental services, resulting from more graduates and the greater use of auxiliaries.

How will the majority of dentists who are still in solo practices respond to these challenges?

- Similar to physicians in the 1990s, will they form Independent Practice Associations to compete with large dental group practices and to increase their negotiating leverage with purchasers?
- Will many solo dentists decide to form or join group practices? The past 20 years have seen the virtual collapse of solo medical practice; the majority of physicians are now in some form of group practice.
- Will some dentists see advantages in becoming part of large medical care organizations? Of course, this depends on hospitals and medical group practices making a decision to offer dental services.

In all likelihood, all these options will be pursued, as dentists respond to different local market supply and demand challenges.

### Long Term

It is too early to judge how the challenges faced by the profession will be resolved. If the right decisions are made in the next several years, the long-term future (e.g., 20 or more years) is bright. This is because most Americans value and want more dental services. National norms of good dental health are high, and all people want a functional and esthetic dentition. Americans also have empathy for the less fortunate, so in time public resources will be available to provide the underserved financial access to

basic dental services. What all this means is that there is a strong underlying demand for dental care, if it is affordable.

At the same time the practice of dentistry has the opportunity to evolve into a medical discipline with a firm foundation in the biomedical and clinical sciences. Research is providing dentists in public health and clinical practice more evidenced-based methods to improve oral health by community prevention programs and personnel preventive and curative services, respectively. These advances will make dentistry an even more satisfying and rewarding career.

### Conclusions

This review suggests that the dental education community and practitioners face some difficult years ahead, but the long-term future is very promising. Yet, the challenges now facing the profession are real and must be addressed. Indeed, the real danger is to assume that there are no problems, and that the status quo will continue into the foreseeable future. This is clearly not the case.

What dentistry needs are leaders who will come together and address these problems, realizing that they are contentious and likely to lead to conflict among people of "good will." They need to take a long-range perspective of what is best for the American people and the profession. They need to convince a disparate group of dental educators and practitioners to come together and pull in the same direction. They need to convince the profession and the public that this is the time to make fundamental improvements in the current system for educating the dental workforce and delivering care to the population.

While the times are challenging, this is also a period of opportunity and optimism. This idea is captured in the famous quote from President John F. Kennedy.

"When written in Chinese, the word 'crisis' is composed of two characters. One represents danger and the other represents opportunity."

## 危機

*"When written in Chinese, the word 'crisis' is composed of two characters. One represents danger and the other represents opportunity."*

— President John F. Kennedy

# New comprehensive care clinics



**A**lexander Fuller, a fourth-year dental student at the Kornberg School of Dentistry, had had enough walking. Every day he'd hustle from appointment to appointment, up and down flights of stairs and through the school's long corridors and back again, to earn his requirements for graduation. One day, his curiosity got the better of him.

"I actually wore a pedometer to see how much running around I did," Fuller says. "It came to be almost five miles, and that wasn't even a full day."

But things have changed for Fuller and his fellow students, after the school transitioned from a department-based model to comprehensive clinics last spring. It was a fundamental reorganization of Kornberg's clinics—pegged by ranking faculty members as a modernization of the school—that grouped all of the junior and senior graduate students into one of four "clusters" during their final two years.

Now, Fuller reports to not only the same clinic each day he's at the school, but the same exact chair. He can perform most procedures on the spot, including those that incorporate fixed prosthodontics, removable prosthetics and limited endodontics, instead of running from department to department. His patients know where to find him, and he works closely with the faculty assigned to his cluster, as well as administrators who help with scheduling and paperwork.

"It's much more efficient," Fuller says. "All the materials I need are somewhat close; I don't have to run up and down floors, between different faculties, and all of that. Those were big time wasters."

That's an encouraging review for Kornberg faculty, who forged ahead with the change in May after approximately five years of planning. The transition comes at the tail end of a trend across the academic world, which saw most universities adopt a comprehensive



model sometime over the past several decades. However, Kornberg's hesitancy to switch has turned out to be an advantage.

"We were able to learn from other schools, and other models, and take the best of them all to put together in our model," says Hana Hasson, DDS, MS, an associate professor and director of cluster 2B. "For example, other schools have organized their models in such a way that a faculty member stays with their students through two years of clinical practice. So that limits student exposure to different practices and abilities."

In Kornberg's model, students are assigned to either cluster 1, 2A, 2B, or 3, named for the floor on which they reside. Each cluster is overseen by a cluster director, or leader, who is responsible for the progress of about 40 students and directly interacts with the cluster's senior students. The directors are assisted by a faculty mentor, who oversees all of the third-year students in the cluster, and also a team of five or six faculty row instructors, an administrator known as a clinical coordinator, and a secretary.

"It's one big group practice, and very realistic," says John Friel, DDS, assistant professor and director of cluster 3. "We have a receptionist that makes and confirms appointments, and a businessperson that takes credit cards and payments and deals with pre-

authorizations. I think that it's a big plus for the students, and they're learning real-world dentistry, where they're not just focused on one department but the total patient care package."

For their part, students seem to agree that the cluster model cuts down on headaches. Many fourth-year students, who saw both models during their clinical care experience, say the new system reduces the limitations of quirky computer systems and paperwork while improving the patient experience.

"In the old system, it was a battle to get chairs every morning at 8 a.m.," says Mary Grace Rizzo, a fourth-year student in cluster 1. "I'd log into a computer system and try and find an opening in the section I needed, and it wasn't necessarily fair because it was just whoever clicked the fastest. Now I don't worry about that, I know I have a chair on certain days."

Michael Saba, a student in cluster 3, says this sometimes chaotic system would often affect patient relationships.

"If you couldn't get a chair to see a patient, they often wouldn't believe that there wasn't room for them in a dental facility," Saba says. "Then they'd walk in that day and see half the chairs not being used, because a student would book a chair just to have it."

Now, each chair is shared between two students, with seniors taking Monday, Wednesday and Friday mornings, and juniors taking Tuesday, Thursday and Friday afternoons. In addition to resolving the fight for chairs, students also say the cluster's coordinators and other administrators help to cut back on how much paperwork they handle.

"We're a bit like a den mother," says Rosalind Neal, who oversees the daily ins and outs as coordinator of cluster 2A. "Basically, we make sure that operations are running smoothly, and act as liaison between the patients, students and faculty."

For all the positives of the new system, there are a few points of concern for students and faculty. Chief among them is the fact that students will see fewer faculty members, and therefore schools of thought, over their two years of providing clinical care.

“The cluster system streamlines things a lot more, but I also don’t mind seeing other faculty perspectives on how to do things,” says Colin Rice, a fourth-year student in cluster 1. “Since the cluster is a set faculty group, we don’t always get to experience the other philosophies or certain faculty members who know [procedures] to do things more quickly.”

However, while some students no longer have the option to pursue chairs with professors of their choice, faculty members say the more personal relationships that result from the cluster system can also have positive effects.

“From a mentorship standpoint, you may only get to know a small group of students well, but then they open up to you,” says Gene Whitaker, DMD, PhD, associate professor and mentor. “If they get to trusting you, they may share what their problems and weaknesses are, and that’s what we want them to do. If they have an issue, they’re now comfortable discussing it.”

Mentor and associate professor Mark Meraner, DDS, says that more interpersonal advising is a goal the school has had for years.

“I’ve been here 33 years, and in that period of time [the school] has tried to develop some sort of advising system where full-time faculty would be assigned a certain number of students and do the kinds of things mentors are supposed to do now,” Meraner says. “But it would come and go and never really became consistent. There was always a perceived need to do this.”

Another positive of more closely monitoring students is ensuring that some don’t get lost in the shuffle or miss requirements. Mandatory attendance was also instituted—something that caused groans among some students but will benefit their experience in the long run, faculty members say.

“When we started, some students were trying to avoid the front desk or just go around the corner because they’d always done it that way,” Hassan says. “Really, it’s about the change of looking at a patient not as a requirement, but in the sense of providing total care.”

At the end of the day, students and faculty know that the most important thing isn’t the number of footsteps they take, or the amount of papers they fill out, or the battling over chairs. Instead, it’s two primary questions: Did the patient get the best quality care, and did the student get the best possible education?

Time will tell just how much positive impact the switch to a cluster system will have, but faculty and students alike are optimistic that it will only further improve the quality reputation of Kornberg’s services and graduates.

“There’s always resistance to change, especially when you already have large group practice associations coming in and hiring Temple students because they have great experience right off the block,” Friel says. “But we just felt we could make it better, and I think we have.”

Despite the fact that Fuller’s clinical rounds no longer double as his daily exercise, the soon-to-be graduate agrees that the experience is better for students and patients alike.

“We don’t have to reintroduce a patient to different faculty in different rooms and waste time explaining what’s going on over and over. Instead, we get right to it,” Fuller says. “We can do more and focus on care instead of paperwork. It’s interacting with a human being instead of a paper trail.”







during the spring 2013 semester to begin planning.

The E-Campus platform utilizes technology powered by healthcare-learning.com. This UK-based company specializes in providing interactive teaching and online courses for healthcare professionals. The advisory committee worked closely with the company to prepare the platform for the Temple dental community.

This new undertaking will elevate Kornberg Dental to new heights in the dental world. While online courses are fairly standard across much of academia, few dental schools offer online CE courses because of the hands-on nature of dentistry.

The first course to be offered on the E-Campus platform will be the “Dental Implantology” certificate course. Offered completely online, the course will feature material from seven Kornberg Dental professors.

“The reason we chose to offer this specific course first is because it’s Kornberg Dental’s largest and most popular certificate course,” explains Dr. Badi.

One feature that will certainly differentiate Temple’s E-Campus initiative from anything that has been done in online dental education before is the platform’s E-Portfolio feature. In addition to serving as a

resource for professionals, the E-Portfolio feature will support what students are learning in the classroom by allowing them the chance to collect case studies interactively at a learn-as-they-progress pace.

“We’re considering requiring students to have at least one E-Portfolio throughout their time at Kornberg Dental,” says Dr. Badi. “Creating an E-Portfolio will help students with critical thinking and interdisciplinary skills.” Dr. Badi said he is unaware of any other dental school offering an E-Portfolio to students.

Perhaps the most exciting part about the E-Campus initiative is that it will not just benefit Temple students and alumni, but will be open to students and professionals nationally, and in the future, internationally.

For years, Kornberg Dental has offered successful continuing education courses on campus, often requiring professionals to commit to traveling to Philadelphia for two to three days to earn credits. Now, Kornberg Dental alumni, along with other dental professionals, including dentists, specialists, assistants and hygienists, will have the opportunity to learn from Temple’s first-class faculty at their own pace, from the comfort of their own homes and offices.

In the future, Dr. Badi hopes the online platform will utilize more online tools, including blogs, to make learning more interactive and fun. Students will be able to learn at their own pace, take breaks and utilize all kinds of online tools.

“Apart from the E-Campus platform being convenient and flexible, it enables Temple to share its dental knowledge and expertise with the world,” says Dr. Badi.

Other future plans involve opening up the E-Campus platform to the world—including translating the materials to prevent language barrier issues. Dr. Badi suspects the first language the platform would likely be translated to is Chinese.

As the platform begins to grow and become a fixture at Kornberg Dental, Dr. Badi expects that the University will allow outside dental experts to share their knowledge through the platform. Temple aims to be the thought leader behind this new technology that will benefit dental professionals for years to come.

“Dentistry is such a hands-on profession,” explains Dr. Badi. “While we understand the importance of keeping our program hands-on, we also want to adapt to the world we live in by helping future dental professionals learn in the ways that suit them best.”

## MAKING THE IMPOSSIBLE, POSSIBLE



Before (left) and after: Nothing is the same in this largest simulation lab in the country.

It's May 24, 2013, and the entire preclinical lab for general dentistry has been fully demolished. The timeline was just two weeks, but an even tighter deadline lies ahead. In three months, an entirely new lab must be ready for incoming students.

To accomplish this feat, two shifts of 18 men each will essentially work around the clock for the first month. Then as certain plateaus are reached, the team of tradesmen will be scaled back accordingly.

All utilities will be relocated the only way that makes sense: in the ceiling of the clinic below. Plumbers alone will put in 1,000 feet of piping—without impacting operations.

### Monumental Constraints

"That was the goal," says Theo DeSanto, Temple's senior project manager, facilities management, as he reflects on the undertaking. "That was why we worked at night."

The constraints were obviously monumental: use of an existing space, a short time period and a tight budget. "It was more difficult than building a house with three levels," says Dean Ismail, who admits he was prepared for construction to be completed one to two weeks late. "But Theo is the person who made it happen," he emphasizes, with a nod of agreement from Dr. Dan Boston, associate dean for clinical comprehensive care who helped coordinate the project.

A centerpiece of the renovation is certainly the simulator. No longer a head on a stick as in the previous lab, the simulator is a patient torso and "exactly like seeing a real patient," says Dr. Boston. "It's the latest model from a manufacturer who makes dental operating equipment. You can develop ways of working, get the proper approach and not learn bad habits." Helping also with the true-to-life environment are the instruments. They're legitimate ones, identical to what's in the school's general sterilized system.

Such thoughtful planning marks each element of the design. Nothing is the same as it was. Aisles are wider for ease of movement. Benches are lower with no cabinets above to impede sightlines and student interaction. Internet and intranet capability, monitors that can show live video and documents from the instructor station and hookups for guest lecturers' laptops enable use of the most current technology. Portable and standing microphones allow instructors to move around and engage students. Electric, suction, natural, water, compressed air, an active filtering system for fumes and an AV system are all squeezed into customized stations that make use of every square inch.

Overall, the look is inviting and comfortable. Rather than one large room, two smaller ones, mirror images with 71 stations each, create a friendlier space. In the middle is a lab enclosed with lots of glass. At the entrance is a display case with large replicas of dental instruments and a skylight that captures light for the instructor station. Graphic blocks of color, actually doors on locked instrument cabinets, fill two ends of the room. Still to come is artwork that will add interest to the walls.

Also to come is a digital lab with milling stations for crowns, prostheses and other restorations. With all the infrastructure in place, work will begin in about six months. It will be the last step in a renovation that features the largest simulation lab in the country.

### **Blazing Some Trails**

Financing for the project came, in part, from the university. "The Dental School is paying off a five-year, \$4 million loan from Temple," says Dean Ismail. Ken Kaiser, Temple's interim chief financial officer and treasurer, describes his reaction to the request. "We were happy to partner with the dental school and the dean. It's a worthwhile project, and it's the right thing to do for the students. The dean had great ideas and was creative. He didn't just ask for a handout. He's using his own resources, too. It's been



*Week of June 3, 2013*



*Workstations looking south, July 26, 2013*



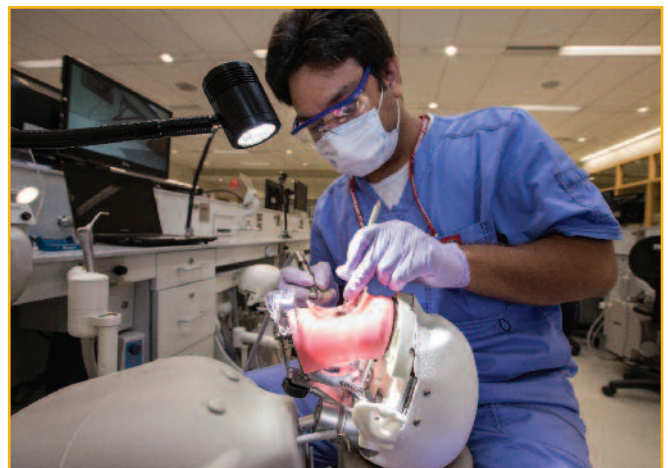
*Row A close-up, August 7, 2013*

used as a model, jump-starting deals with other deans for new programs or renovations. He's blazing some trails."

At a time when Temple is changing its budget model, Kaiser is particularly pleased that Dean Ismail is thinking entrepreneurially. "Our new budget is based on revenues rather than expenses, and the dean is generating new revenues. So the more revenue he brings in, the more he can spend." Comments the dean: "Things do not just happen. They have to be made to happen."

Asked why he wanted to renovate now, Dean Ismail explains, "The lab was built in 1990. It was 23 years old and deteriorating. We couldn't get parts. Technology has advanced, and our students could see the difference. We're now providing students with the environment they deserve for excellence in clinical education and practice."

To reach that goal, planning began with input from a faculty committee. "We developed requirements before construction," says Dr. Boston. "Then we saw four designs before the dean and the faculty chose one." Providing coordination from the school side in





the initial stages through to completion, Dr. Boston met regularly with the architect, contractor and suppliers. "We were lucky that general contractor J.J. White stayed with us. He had worked on our other clinic renovations and knew the school and had the same workers. We also appreciate the quality work of architect Brian Ychyshen from Bohlin Cywinski Jackson." But it's DeSanto who gets the highest praise. "I'm sad to see Theo leave," Dr. Boston remarks, recognizing that DeSanto needs to move on to other Temple projects. With a smile, DeSanto responds, "I'm very proud of this particular renovation. The level of detail and design in a short amount of time was quite a task."



# Goes Global

## THE KORNBERG SCHOOL OF DENTISTRY EXTENDS ITS MISSION INTERNATIONALLY

The school's students and faculty members gain first-hand knowledge of the global challenges in accessing oral health care as they provide treatment and education to adults and children. In addition, faculty travel internationally to teach, provide academic or professional consultation or conduct research with international colleagues.

The school recognizes that its graduates are entering a truly global profession. The school's vision encompasses both local and global perspectives and aims to contribute educational, research and service outreach that will make a positive difference right here in the community and beyond.

### **The Advanced Education in General Dentistry/Master of Science in Oral Biology (AEGD/MS)**

Kornberg School of Dentistry offers Kuwaiti residents a certificate program for both AEGD-1 and AEGD-2, a two-year overall AEGD program combined with either a Master's of Science or a Master's of Public Health degree. Additionally, the Kuwaiti residents are eligible to challenge the American Board of General Dentistry written and verbal examinations. This program, which began in the 2011-2012 academic year, was started to provide Kuwaiti dentists with training in more advanced dental procedures so they can be more versatile and provide outstanding quality care to their patients in Kuwait.



*Kuwaiti students gather for dinner for a night out with the dean and several faculty members.*

“Through this program, the students, faculty and staff learn about Kuwaiti culture and lifestyle,” explained Alessandro Bartoletti, DMD, director, AEGD Program. “Similarly, the Kuwaiti residents gain the invaluable experience of learning about our culture and lifestyle in addition to the advanced clinical training they receive.”

Following completion of the program, residents return to Kuwait to practice within the Ministry of Health system for three years. Once that time is complete, they will be able to either remain with the Ministry of Health or, should they so desire, enter private practice in Kuwait.



Participants from numerous countries traveled to London for the Global Collaboratory for Caries Management this past June.

### **The Global Collaboratory for Caries Management**

The purpose of the Global Collaboratory for Caries Management held in June in London was to complete protocols for the Practice and Education domains of ICDAS and ICCMS. ICDAS is a caries classification system that was started in collaboration with various countries across the globe to define and develop consensus on how best to preserve tooth structure through prevention of the initiation of tooth decay and the minimal removal of cavitated hard dental tissues. Dean Amid Ismail was one of the team leaders in the project. This conference was a follow-up on

the previous global caries management workshop which was held at Kornberg in 2011. A new protocol for caries management will help the school to implement a contemporary cariology and restorative care program.

“The conference helped promote oral health across the world as the protocols for caries classification and management will be standardized across the globe,” said Gayatri Malik, BDS, PhD, assistant professor, Pediatric Dentistry and Community Oral Health Sciences, who was selected to attend the conference. “The meeting was very beneficial as I got to interact with

renowned leading researchers and dental practitioners and share their thoughts on the current dental practice. We also got an opportunity to be a part of a group which is putting together various protocols in preventive dentistry, which is going to be the future of dental practice.”

He added that during the few months he has been at Kornberg, he has realized that the dean’s progressive ideas and collaboration with various countries on different aspects of clinical and research dentistry will help Kornberg to share and integrate ideas from all over the world. “This will help us in



*Bridge to Peace students attended a "white-out" Temple Men's basketball game during their stay. From left, Orit Markman, Batoul Abuassba, Areen Saleh Abdo, and Liat BenMoyal-Segal.*

providing our patients with state-of-the-art dental care."

Matthew Palermo, DDS, interim chair, Department of Restorative Dentistry, who also attended the conference, said "the various international programs provide Kornberg with an opportunity to share its knowledge with other countries, and also give us a perspective on issues they are facing. Education is needed in many regions of the world, and Kornberg is helping to close the knowledge gaps in these regions."

### **The Alliance for Oral Health Across Borders**

The Alliance for Oral Health Across Borders is an organization that currently includes over 40 dental schools, companies, foundations and individuals. The organization, of which Dean Ismail is chairman of the board, is focused on developing ambassadors to promote peace and understanding among dental students and faculty from diverse regions of the world that are in conflict. A major online and face-

to-face training program will be launched in December in New York. Program sites where members can collaborate and work together are being identified.

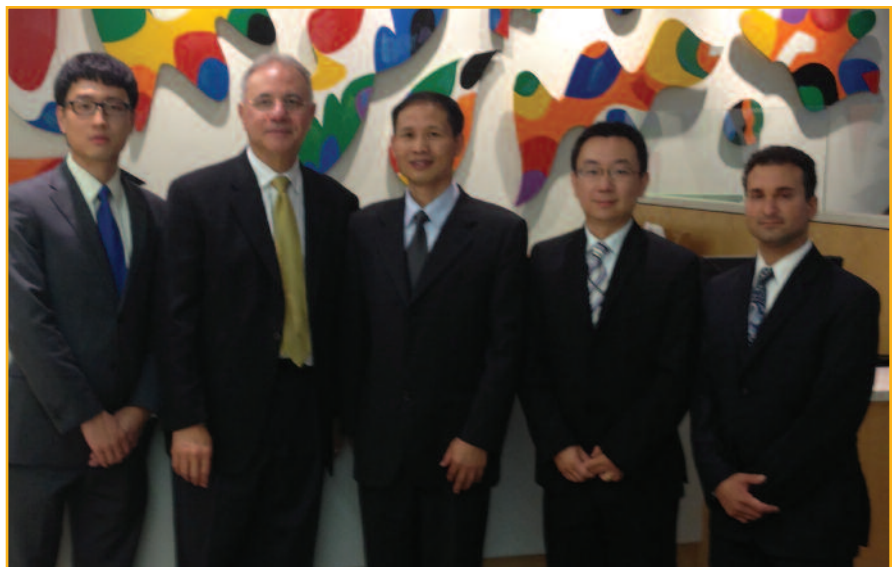
### **Topchoice**

Kornberg is negotiating with private dental groups in China to provide continuing dental education for dentists from that country working in private practice. It is expected that the first course will be offered in Philadelphia this December.

### **Bridge to Peace**

On July 10, Dean Ismail was a keynote speaker at an American, Israeli and Palestinian gathering of dentists and dental leaders in Jerusalem to celebrate the unveiling of the *Tree of Peace* at Al-Quds University. This new tree represents the fourth tree unveiled in the world. Allen Finkelstein, DDS, Class of 1969, is the primary sponsor and donor for this initiative.

On May 4, 2012, a *Tree of Peace* was dedicated to the Kornberg School of Dentistry by Dr. Finkelstein, in honor of his children and grandchildren. Designed by Parisian sculptor Hedva Ser, a UNESCO Artist of Peace, it is a reminder of the strides being made to create a legacy of global peace through



*Visitors from Topchoice toured the dental school this past semester and discussed future collaborations with Temple. From left: Yi Hong, PhD, general manager of Eyar at Topchoice; Dean Ismail; Qihong Fu, DDS, PhD, CEO of Topchoice Medical; Maobin Yang, DDS, MDS, PhD, assistant professor, Kornberg School of Dentistry; and Matthew Palermo, DMD, interim chair of restorative dentistry.*





The "Tree of Peace" stands in front of the Kornberg School of Dentistry and is a reminder to all of the strides being made to create global peace through dentistry.

dentistry. Ser has been recognized for her contribution to the defense of tolerance and the meeting of cultures through art and for her creation of the *Tree of Peace*.

"People have more in common than they differ," commented Dean Ismail at the Kornberg unveiling. "All humans need peace, but not all live in peace. The *Tree of Peace* is a true reminder to all of us that peace is a simple word that has tremendous meaning. It is the foundation for life and prosperity and something we all need to strive for in our lives."

"Attendance at international programs and involvement with the Alliance strengthens Kornberg's position in the global dental school arena," concluded Dean Ismail. "The reputation of Kornberg as a global school will create opportunities to bring together students, faculty and staff from around the world together with Kornberg students and faculty to learn about the U.S. and dental education in our country."

## Dr. Maobin Yang Bringing New Life to Root Canals

If all goes according to plan, Maobin Yang, DDS, MDS, PhD, is going to bring new life to root canals—literally. Dr. Yang, an assistant professor at the Kornberg School of Dentistry, is focusing his research at Temple on the new field of pulpal regeneration, which aims to create methods to replace decayed pulpal tissue with healthy, living tissue.

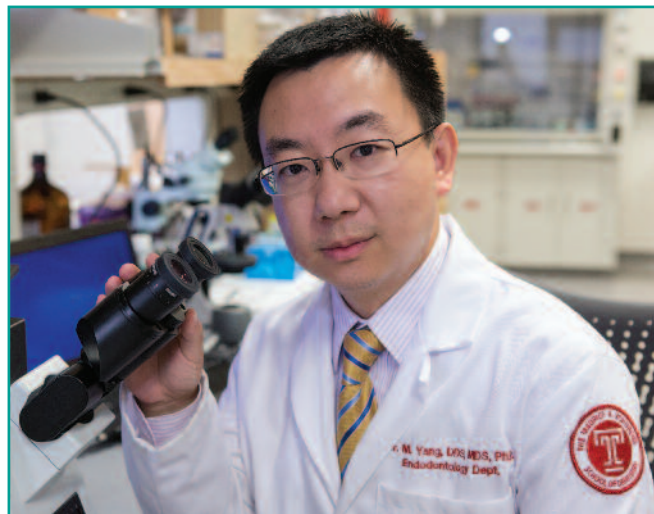
“This is a new direction, especially for endodontics,” says Dr. Yang. “Traditional root canal treatments have been [relatively unchanged] for about 50 or 60 years, and even went back further with the use of inert materials like mercury before that.”

Dr. Yang says there are two main methods for pulpal regeneration. The first, revascularization, is already used in clinics and involves inducing bleeding into the root canal in the hopes that it will encourage new, natural tissue development.

“This is not a very predictable method; some cases fail and some succeed, and we don’t have a lot of control over that,” Dr. Yang says, adding that it is difficult to determine why the procedure succeeds when it does, since it requires pulling healthy, regenerated teeth.

Instead Dr. Yang, in a novel collaboration with the Temple College of Engineering’s Bioengineering and Biomaterials Center, is much more interested in a second method: tissue engineering. This method involves using a combination of stem cells, growth factors and biomaterials to predictably create new pulpal tissue inside the root canal.

The three factors work a bit like a bowl of soup. The stem cells act as the ingredients, the biomaterials serve as the pot in which to hold them, and the growth factors work like a secret recipe: what temperature to use and how long to boil to achieve the best result.



*Dr. Yang performs his clinical research at the College of Engineering’s Bioengineering and Biomaterials Center located on Temple’s Main Campus.*

“The growth factors are usually small molecules, like a protein, that guide cell proliferation to form the tissue you want,” Dr. Yang explains. “But the key question is how to control their release. You need them to work at a certain time, in a certain location. That’s the focus [of our research] right now.”

Although the growth factors might be the most puzzling of the three components of tissue engineering, the biomaterials part of the equation needs answers as well. These materials work as the scaffolding for regenerating tissue, and must have just the right qualities to be effective. That’s where the experts at the College of Engineering come in.

“There are all kinds of biomaterials. You need one that is not too stiff, won’t be rejected by the body and can provide a reservoir for growth factors,” says Dr. Yang. “I arrived at Temple last year, right when the [Center for Bioengineering] was created, and we realized what a great opportunity it was. They’re the experts in biomaterial.”

**“I arrived at Temple last year, right when the [Center for Bioengineering] was created, and we realized what a great opportunity it was. They’re the experts in biomaterial.”**

Dr. Yang works closely with College of Engineering faculty and students, often in the center's 20,000-square-foot, state-of-the-art lab, to develop appropriate materials. One key factor is the material's degradation, which Dr. Yang compares to dissolvable stitches.

"You don't want materials to stay in the human body," says Dr. Yang. "You have the rate of tissue regeneration, so you have to inversely match that rate with the degradation of the scaffolding."

None of this would be possible without recent advances in the study of dental stem cells, which lags behind similar fields. While many of the first stem cells were discovered by researchers in the 1960s and '70s, Dr. Yang says the first dental stem cells weren't discovered until the new millennium.

"The first [dental] stem cell was discovered by a Chinese scholar, who was looking at the inside of his daughter's baby tooth and thinking about what cells are in there," Dr. Yang says. "Now we know of five kinds. And it turns out these cells are obviously more accessible than from cord blood or bone marrow."

The possibilities of dental blood cells have fascinated Dr. Yang throughout his studies and career. Born in China, Dr. Yang earned his bachelor's and master's degrees there and began clinical work. However, he developed a natural curiosity about how new research might translate into clinical procedures and decided to pursue a PhD in biomedical science at the University of Connecticut.

"I completed my PhD in 2009 but kept thinking about how to apply research to the clinic and continued my residency for another three years," Dr. Yang says. "I was doing root canal treatments on a daily basis, and every day I'm thinking about how I take out pulp and put in new material, why not come up with a different way?"

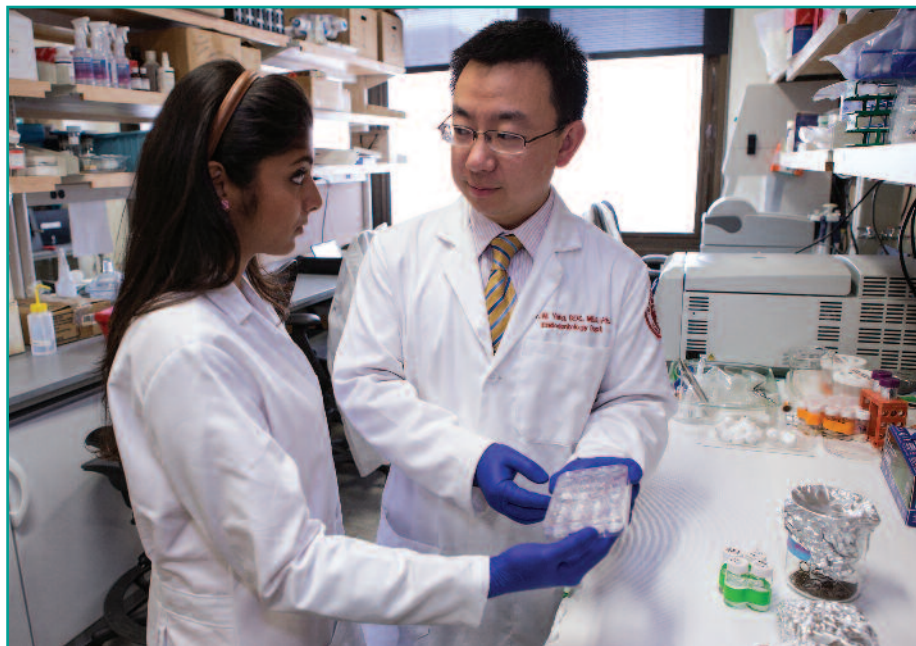
Now, using the resources at Temple, Dr. Yang is trying to do exactly that. And the possibilities are promising. "Every year in the U.S., 22 million endodontic procedures are performed, costing about \$30 billion," Dr. Yang says. "And for kids [who have root canals] the root is not formed and will not continue to grow, so conventional treatments leave a very fragile tooth."

While Dr. Yang's research is currently fully funded by the university, he says that more money is being set aside by organizations like the American Association of Endodontics, which earmarked \$2.5 million for regenerative endodontics in its budget for next year, and the National Institutes of Health.

"This field is going to become more and more competitive because a lot of people think this is the future and will benefit a lot of patients," Dr. Yang says.

And although he won't say just how close the research is to being ready for bench and animal studies, Dr. Yang seems to think he has a jump on the field.

"This is a hot territory now, but so far we haven't found another group doing the same thing," Dr. Yang says. "We believe the things we're working on are very innovative."



*Dr. Maobin Yang works alongside his graduate research assistant, Riddhi Ajit Gangolli, who is currently pursuing her PhD in Bioengineering at Temple University's College of Engineering.*

## Dr. Mustafa A. Badi

### A Passion for Radiology



**M**ustafa A. Badi, DDS, MS, assistant professor, Department of Oral Maxillofacial Pathology, Medicine, and Surgery Division of Oral and Maxillofacial Radiology, has a passion for technology and was always looking for a career that would blend his dental background with technology. Both the availability of digital dental radiography in the early 2000s, and the introduction of cone-beam CT (CBCT) technology in the dental field, attracted him to specialize in oral and maxillofacial radiology.

“I am particularly attracted to the field of oral and maxillofacial radiology because it is the basic study of dental diagnostic science,” explained Dr. Badi. “Comprehensive

and effective treatment of any dental problem relies on good and sound diagnosis. Also, currently there is a shortage of oral and maxillofacial radiologists trained in reading and interpreting the advanced imaging modalities available in dentistry today.”

Dr. Badi joined Kornberg School of Dentistry in January 2013. A graduate of Istanbul University Faculty of Dentistry, Istanbul, Turkey, he attended the University of Texas Health Science Center, San Antonio, for his residency and postgraduate training. He had been in the dental field for 11 years prior to going back to graduate school to specialize. His previous experience in the field of dentistry includes general dentistry, CAD/CAM den-

tistry, radiology and dental informatics.

Oral and maxillofacial radiology is the ninth specialty of dentistry recognized by the American Dental Association. An oral and maxillofacial radiologist (OMR) is a dentist specialized in the acquisition and interpretation of radiographic imaging studies performed for diagnosis and treatment guidance for conditions affecting the maxillofacial region. Specialization in OMR requires the completion of residency in an American Dental Association CODA-accredited program. Training includes a thorough knowledge on techniques and interpretation for maxillofacial CT, CBCT, MRI, ultrasound and other pertinent modalities. OMRs may be further qualified by passing the American Board of Oral and Maxillofacial Radiology (ABOMR) exam.

The radiology clinic at Kornberg School of Dentistry is equipped with digital intraoral sensors, digital panoramic radiography machines, state-of-the-art cone-beam CT machines (CBCT) for both small and large fields of view. It has a state-of-the-art radiographic interpretation room with dual monitors and fine viewing software and a central storage of images in a PACS system that makes it accessible throughout the school.

“Conventional 2D dental imaging technology sometimes has limita-

tions in dental diagnosis,” said Dr. Badi. “Two-dimensional radiographs are a representation of a 3D subject. The true third dimension in dentistry had been missing until the introduction of CBCT technology in the late 1990s and early 2000s.”

CBCT technology utilizes a cone-shaped beam of x-rays to produce computed tomography images of the craniofacial structures at a fraction of the dose usually used in medical imaging. During a CBCT scan, the scanner rotates around the patient’s head, obtaining many base images. The software collects the data and reconstructs it, producing a digital volume composed of three-dimensional voxels of anatomical data that can then be manipulated and visualized with specialized software. CBCT has become increasingly important in treatment planning and diagnosis in implant dentistry, orthodontics and endodontics.

“At Kornberg, we are lucky to have a good team of faculty with years of experience who specialize in different aspects of dental diagnostic sciences, including oral medicine, oral pathology and oral radiology,” said Dr. Badi. “Since we are in an educational institution, we want our students to learn the best patient care practices.”

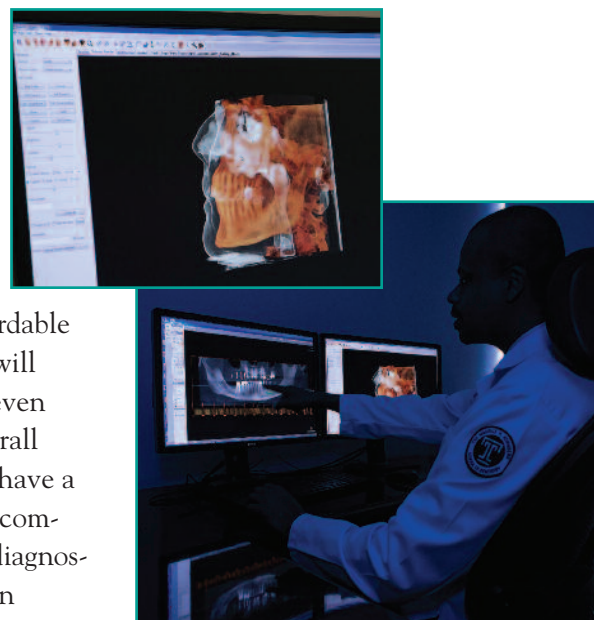
A goal for Dr. Badi, and all of the faculty and staff, is to provide an overall positive experience to en-

courage more patients to seek dental care. “There are a number of patients that avoid dental care due to dental phobia. The more positive the experience patients have with their dentists, the more they’ll be willing to seek dental care. The goal is to encourage and improve overall oral healthcare in as many patients as we can and to provide information and directions on where they need to go next.”

Dr. Badi explained that Kornberg has focused on reorganizing the clinical training structure to reflect a more realistic general practice modality that will equip the students with the knowledge and experience they expect to face in their real-life dental careers. “These general practices also have the advantage of providing a permanent location for the new patients getting admitted in the dental school. This makes it easier for patient’s dental problems to be addressed in a vast dental school setting.” He added that Kornberg has always been known to provide excellent clinical training to dental students and wonderful dental services to the community at an affordable cost. “I am hopeful that we will grow to provide services to even more communities. The overall goal is to train dentists that have a strong background of ethics combined with evidence-based diagnostic and clinical skills that can

improve the overall oral healthcare of the community. At the same time, I see the school providing excellent affordable dental care that is focused more in comprehensive treatment and thereby influences dental behavioral changes to improve the overall oral health care standards.”

In the future, Dr. Badi plans to develop and provide training that enables the new dental graduates to deliver quality dental care to the public. “Students need to be trained and educated in the importance of learning good dental diagnostic skills, understanding the limitations of dental radiography, radiation protection and safety, modern conventional and advanced imaging modalities, indications and limitations of emerging technologies. I will also focus on mentoring students about the importance of providing patient-centered overall oral healthcare.”



## Dr. Merriam Seyedain, '11 Her Role in the Future of Dental Care?

The question prompted thoughtful and concise answers. That's because Merriam Seyedain, who has always wanted to teach, knows what she wants to impart to her students as they begin thinking about their future dental practices.

A periodontist who is also assistant professor in Kornberg Dental's pre-doctoral clinic, Dr. Seyedain says her goals are twofold: to teach students to see the big picture for better comprehensive care and to develop confident students who can have positive relationships with patients.

"Comprehensive care is how we were trained here in residency," she points out. "But when I compare now to what I was taught as a resident, over time I've realized that the patient relationship is also very important. I talk to the students about it.

They should take time to listen to patients, see what they want and what they're interested in. Then they will be more open to treatment because they know they have a part in the treatment plan."

Asked how the Dental School supports her goals, she responds positively. "Our students get a lot of treatment planning. The faculty I work with are all on the same page. We all practice and teach in a com-



prehensive way. Faculty with different specialties work together, giving students the information they need."

What also helps, she notes, are the new clinics. "It's much easier to teach now. In the past every specialty was separated. Now we work like in an outside practice, with all faculty available in every clinic."

**"Over time I've realized that the patient relationship is also very important."**

Dr. Seyedain graduated from the University of Pittsburgh's

biology program and also from its dental school, where her brother is on the periodontal faculty. But when looking for a residency, she remembers how Kornberg Dental caught her attention. "I felt really comfortable and connected with the faculty from the first day. We have a lot of great names in research in our department and I believe all faculty are clinically out-

standing. I feel really good about being here and am so glad I chose Temple. It's a second home for me and has been for five years now."

Raised in Iran with a father who still practices as a periodontist there, she credits him with teaching her what still influences her professionally every day. "I used to assist him, and he would emphasize, 'Always live your day so you're at peace with yourself when you go to sleep at night.'" She recalls that it always came up with both parents, but he thought it was also important in the field of periodontics. "In fact, it's a big thing I think about all the time," she says. "That's how I try to make sure I do what's best for the patients. I basically imagine that they are my own parents or even myself sitting in the dental chair."

It's just one more indication of how patient relations are always on her mind.

# The Future Depends on Faculty, Faculty, Faculty

In just these few words, Dean Ismail sums up the importance of investing in faculty recruitment and development. In response, the Dental School plans to establish a new fund that will incrementally raise \$5 million over the next 10 years.

"This new fund will enable us to recruit new faculty, significantly strengthening our capacity to maintain excellence in clinical education and patient care," explains Jennifer Jordan, director of development. "In the past we haven't had the capacity to conduct sponsored research. Yet the ability to maintain a strong dual mission in clinical education and research is necessary in the future."

Always thinking ahead, the dean envisions a team of highly qualified, academically oriented clinical and biological science educators and researchers, so the school can expand on the predoctoral and postdoctoral levels. "Temple Dental School will be one of the top-ranked schools in the U.S. and the world in its reliance on research and science for building strong health-oriented clinical programs," says Dean Ismail. "The opportunities are boundless."

To get there, he is asking two questions. What do current faculty need for their development? What type of additional faculty do we need to fulfill our mission?

With plans already underway to hire new faculty, the dean notes, "We expect to be in a pivotal posi-

tion to achieve what many thought was impossible just a few years ago." That's due to the school's innovation in financially managing its resources and in creating new financial streams—which has the support of Temple's president and provost and is in line with the university's new budget model that will be introduced in 2014.

This new phase for Temple Dental fits with the university's current direction of building significant scholarship and research capacity. "We are already part of this new emphasis at Temple," says the dean.

"For our students, the benefit will be an engaging and scientifically based education."

**"We expect to be in a pivotal position to achieve what many thought was impossible just a few years ago."**

To prepare the school for this new path, Dean Ismail will direct a new course, "Science in Dental Practice." It will offer background knowledge on the

scientific method and its applications in clinical, biomedical, epidemiological healthcare and behavioral research. For alumni, the course is noteworthy because its annual Science in Dental Practice day will be an opportunity to earn continuing education credits. The day's presentations of research projects and critical appraisals of clinical questions will engage all students and faculty in considering the applications of science in dental practice.

Be sure to read more in this issue about what's planned for "Science in Dental Practice": New Course Focuses on Research, page 31.

# FACULTY News

**Dr. Daniel Boston**, associate dean for comprehensive clinical care, presented an abstract as a poster presentation at the national American Dental Education meeting in Seattle in March 2013 on “New program for online capstone comprehensive case presentations.” Dr. Boston was also appointed to the editorial board of the online journal, “Case Reports in Dentistry,” and was issued the following patent as an inventor: *Selective Dentin Caries Excavator, Italian Patent 1 143 873, November 28, 2012.*

**Dr. Susan Chialastri**, associate professor in the department of periodontology and oral implantology and graduate of the class of '87, received the 2013 Faculty Award from the Class of 2013. This was presented to Dr. Chialastri at the Senior Banquet dinner at the Water Works Restaurant on May 9, 2013. Dr. Chialastri was also named the Faculty Speaker at Commencement for the Class of 2013 on May 17, 2013, at the Academy of Music.

**Dr. Chialastri** is the 2013 recipient of the College of Health Professions Gallery of Success Award and the 2012 Herbert G. Frankel Award as Outstanding Xi Psi Phi Alumni, which was presented to Dr. Chialastri by the Supreme Chapter representatives on September 4, 2013.

Dr. Chialastri also completed the Teaching in Higher Education Certificate Program in July 2013 through the Education Department at Temple University.

In January 2013, **Dr. Lisa Deem, '87**, associate dean for Admissions, Diversity and Student Services, was elected chairperson of the Pennsylvania State Board of Dentistry. Dr. Deem will serve for at least a year.

On Saturday, September 14, 2013, **Dr. Thomas Deem, '85**, was honored as “faculty member of the game” at Lincoln Financial Field as the Temple Owls Football Team faced the Fordham Rams.

Dr. Deem is an adjunct faculty member in the Department of Restorative Dentistry. He is an

outstanding faculty member at the Dental School and also volunteers his services for Temple Athletics.

**Dr. Thomas Rams**, professor in the Department of Periodontology and Oral Implantology, was awarded his PhD in Medical Sciences on September 9, 2013, after presenting his thesis on “Antibiotic resistance in human periodontitis and peri-implant microbiota” to the University of Groningen in the Netherlands.

**Dr. Matthew Palermo**, interim chair of the Department of Restorative Dentistry, lectured at two national meetings over the past year: the American Academy of Periodontology Annual Meeting in November 2012 and the American College of Prosthodontics Educators Meeting in April 2013. Dr. Palermo was also elected as the Chair of Predoctoral Prosthodontic Educators Committee in the American College of Prosthodontics and the Executive Counsel of the American Prosthodontic Society.

**Dr. Jie Yang**, professor in the Department of Oral Maxillofacial Pathology, Medicine and Surgery, hosted three international visiting research scholars over the past two years; **Dr. Ling Zhu** from Shanghai Jiao Tong University School of Stomatology; **Dr. Zuyan Zhang** from Peking University School of Stomatology, and **Dr Fangfang Xie** from Guangxi Medical University School of Stomatology.

**Dr. Yang** was also invited to be either the keynote or guest speaker at the following international schools or congresses: 53rd Dental Information Education Scientific Forum, Faculty of Dentistry in Padjadjaran University; Faculty of Dentistry at Mahasaraswati Denpasar University; 9th Asian Congress of Oral and Maxillofacial Radiology; and the Chinese Stomatological Association's Annual Meeting in 2012.

Dr. Yang was recently elected to serve as the secretary to the Board of the International Association of Dento-Maxillo-Facial Radiology (IADMFR) and elected to serve on the Executive Council of the American Academy of Oral and Maxillofacial Radiology and serve as the Councilor for Educational Affairs.





# New Course Focuses on **RESEARCH**

**H**ow can Kornberg more fully engage the dental school community in research activities? That's the question a new course, "Science in Dental Practice," is designed to answer.

For instance, suppose students are grappling with the issue of whether to consider dental implants for a patient taking bisphosphonates. In this course, students will do a structured assessment of current literature, looking for all available evidence. Then they'll appraise the evidence and make some conclusions about how to apply it to professional practice, while also considering patient values and preferences. The idea is twofold: to involve students and faculty in the process of scientific inquiry and to provide feedback into the curriculum and patient care from evidence-based findings.

Noting the benefits for students, Dr. Maria Fornatora, associate dean for Academic Affairs, is enthusiastic. "This unique, innovative educational and professional experience will give all students an opportunity to be involved in research and learn how to critically appraise and apply the literature to patient care. It will also sharpen their ability to think critically about patient care by asking the right questions and seeking evidence to support what we do and how we practice now and in the future."

She adds, "Being involved in school-wide research and scholarship as a predoctoral student is a terrific opportunity in and of itself. But the course also provides our students with the skills they need after they graduate, so they can fulfill their professional responsibility to be lifelong learners who incorporate emerging information and best evidence into their daily practices."

The vision of Dean Ismail, the course is scheduled to begin a phased-in implementation within the next 18 months.

Two components will be included: an online seminar series through Temple E-Campus and a practicum that requires each student to attend four annual Scholarly Activity and Research (SAR) Days held in the spring and to actively participate in at least one SAR Day by presenting a scientific poster. The online instruction will focus on such topics as philosophy of science and the scientific method, ethics in human and animal research, how to do a literature search, methods in molecular biology, and evidence-based dentistry. To develop a poster, each faculty-mentored team of 4-5 classmates will answer a question relevant to oral healthcare or dental education. They'll reach their conclusion by appraising biomedical, clinical, translational, educational or epidemiologic literature and research. Initially, posters will be printed and displayed in Mitten Hall, and students will present orally to their peers, browsing faculty and the judges. "Eventually," says Dr. Fornatora, "it would be ideal to have large monitors instead of boards, so the posters are displayed digitally. It would be much greener!"

Currently, predoctoral students seek out faculty and projects if they're interested in research. Since they do research only in their limited spare time, just a small minority participate now in research days, says Dr. Fornatora.

Although the dean developed the course, he sought input from three faculty groups: the Research Committee, the Management Committee and the Curriculum Committee. The result is one that Dr. Fornatora is "delighted to be able to include in our DMS curriculum."

*Two components will be included: an online seminar series and a practicum.*

At first glance, the Kornberg School of Dentistry's Project ENGAGE may appear to be a \$1.75 million philanthropic endeavor. Funded by a \$1 million grant from the United Health Foundation and a \$750,000 grant from United Healthcare, program workers will ring phones and knock on doors in North Philadelphia neighborhoods in an effort to help a vastly underserved youth demographic access dental care.

Currently, only 30 percent of children under the age of 6 in the zip codes near Temple University have access to proper dental care. Project ENGAGE hopes to double that number to 60 percent by providing education, assisting in scheduling appointments at local care clinics and even by applying varnishes or sealants in living rooms.

However, there's something bigger at work. Kornberg Dean Amid Ismail, the primary architect of Project ENGAGE, hopes that in several years healthcare industry experts will look back and see the project as the original blueprint for a new way of providing, and paying for, dental care.

"The current dental care system relies on people to come to us, and the reality is that people will often only come when they have a problem, even when resources are available to them," Dean Ismail says. "But by placing more emphasis on prevention and management of disease, we may be able to shift very high-cost hospital treatments to lower-cost clinical treatments."

Dean Ismail has been a believer in this approach even before legislation like the Patient Protection and Affordable Care Act altered the national conversation around healthcare. He had shopped the idea to different funding sources for more than half a decade before finally receiving the UnitedHealth grants last winter.

# PROJECT ENGAGE

Dean Ismail says it's just a matter of timing.

"We were ahead of our time proposing this [five years ago], before people started talking about systems and integrated care," Dean Ismail says. "And in this case, a health insurance company became interested in testing a new model, because everyone is tracking the realities of high-cost care. And we believe we can provide a solution."

Dean Ismail is a major proponent of providers' taking the first step toward improving an individual's healthcare, something he views as the opposite of the current system and came to realize while working with inner city neighborhoods in Detroit. "It's not just about hospitals and treatments, but what happens in the community and the home," Dean Ismail says. "How do you encourage people to take care of their own decision making, and change their lifestyle?"

However, there was one major hurdle to the dean's idea to visit families in their own homes. In order to find these at-risk individuals, he would need to access large swaths of patient medical histories and home addresses. Not only that, he would then need to share this data with community workers hired and trained from the very neighborhoods that the program targets. Not an easy sell for a healthcare provider's legal team.

"We went into uncharted ground, with a health insurer giving data on their patients to a dental school, for use in a large registry, which will then be accessed by people in the community," Dean Ismail says. "When we first presented that, they said 'Are you really serious about doing this?'"

However, after a lengthy legal review that involved United Healthcare, Temple University and state agencies, the project was green-lighted. The majority of the patient data will be provided by United Healthcare, with records added from the state Medicaid program,

Kornberg and partnering clinics. The school brought in a third-party vendor to build a registry over the fall, and community workers will be making their first calls this winter.

But then the big question will need to be answered: Will the program become financially sustainable? Dean Ismail says initial funds will last less than two years. Anything beyond that will require new capital.

“We’re going to rely on income generated from services to sustain the program,” Dean Ismail says. “So that’s another novel aspect: If we’re successful, other partners will come into the program with funding. You can consider this the startup fund, and then we’ll start gaining operational funds.”

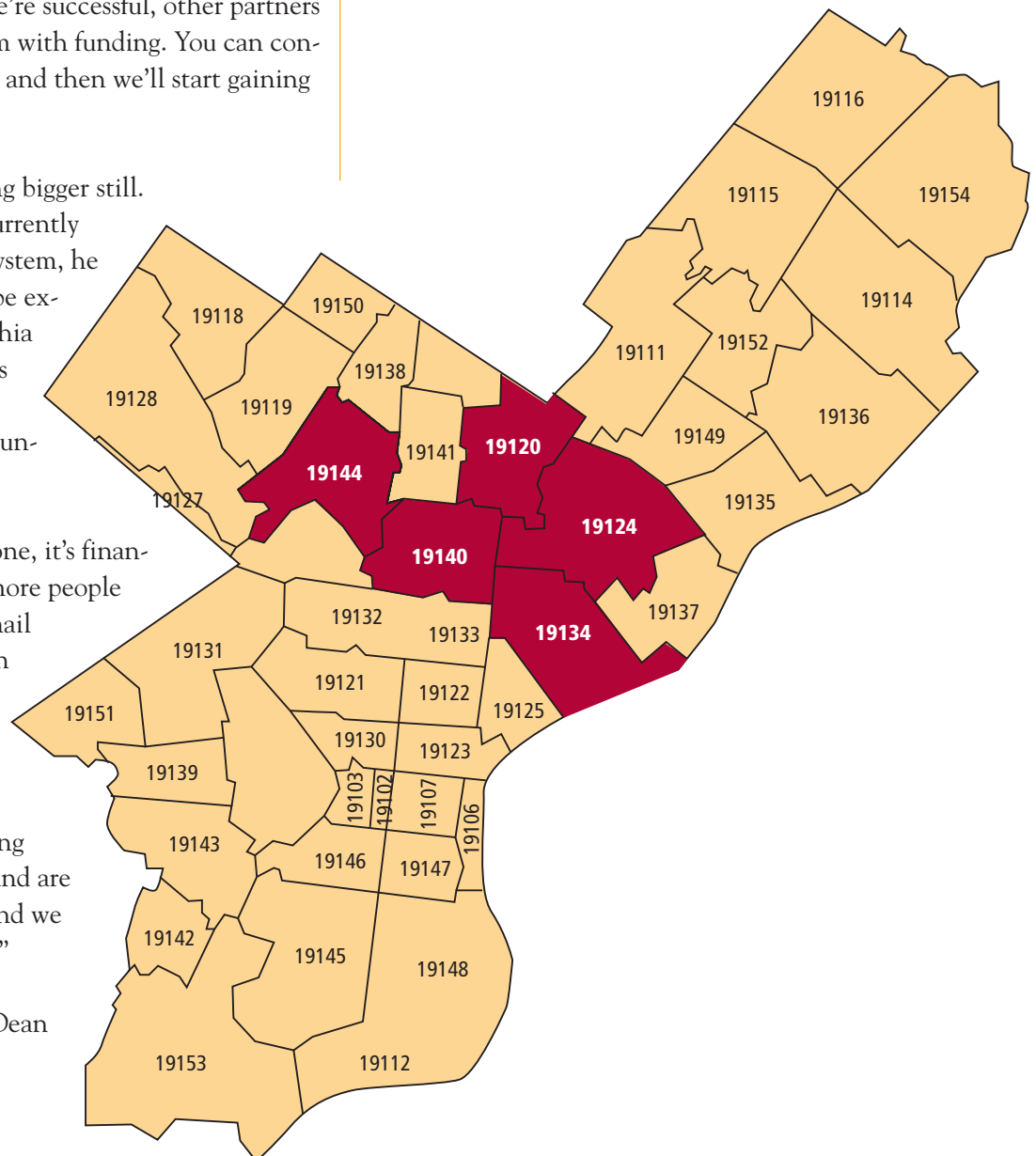
But Dean Ismail is thinking bigger still. Given what he sees as a currently unsustainable, high-cost system, he believes the model could be expanded to other Philadelphia neighborhoods and regions of Pennsylvania, and even be replicated across the country.

“Depending on how it’s done, it’s financially beneficial to bring more people to the provider,” Dean Ismail says. “We’re at the point in time where more resources need to be invested to expand the base and expand access to care. High costs are really shifting the way dentists practice and are impacting their income, and we need a different approach.”

Because of this dynamic, Dean Ismail believes that

the \$1.75 million in grant money is not so much a philanthropic donation for United Healthcare as it is an investment in the future.

“We can’t afford a system anymore where we provide care to a community and then leave,” Dean Ismail says. “This is to be a sustainable model, and insurance companies agree we need to increase the base. We can’t keep pouring in money trying to make the current pie work. We need to make a new pie.”



The Kornberg School of Dentistry has many faculty members currently working on research that will significantly impact the future of the field of dentistry. As we look to see how the next 150 years of dentistry come to life, there is no doubt that our researchers will play a role in this. In this section, we take a look at two of our researchers and find out what motivated them in their fields, what projects they are working on, and what their future plans are.

### STEVE JEFFERIES

#### 1. What projects are you currently working on?

My major research project is translational research concerning bioactive dental cements as well as the examination of some of their unique properties. I am also in collaboration with a researcher in Europe on a unique technology for remineralization and fluoride/drug delivery.

#### 2. Who will this benefit and how?

These materials and their bioactive/remineralization properties may aid in the remineralization of early carious lesions and may reduce the risk of secondary or recurrent dental decay in restored teeth.

#### 3. Are you collaborating with anyone?

Professor Håkan Engqvist at the Angstrom Institute in the University of Uppsala, Uppsala, Sweden.

#### 4. What has been your most significant achievement (scientific or not)?

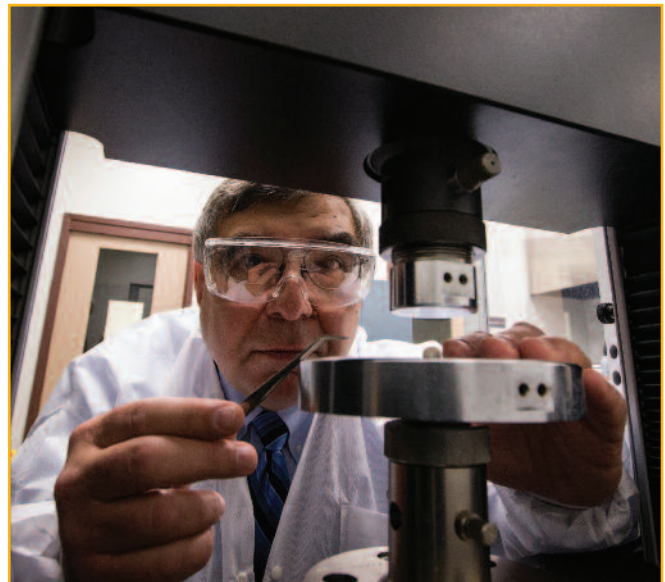
Scientifically/technologically: the invention of Enhance Finishing Device/Enhance Finishing-Polishing System; and my translational research on bioactive cements.

#### 5. Favorite scientist/researcher and why?

May I list two:

Benjamin Franklin: He was truly a multitalented, politically savvy scientist.

Ignaz Philipp Semmelweis: An early pioneer of anti-septic procedures whose highly important scientific observations, which challenged the prevailing dogma, were accepted only many years after his tragic death.



#### 6. Tell us about your first science project/experiment:

I built a wind tunnel for a 7th grade science project.

#### 7. What do you hope to accomplish in the future?

Continue my research on the novel and unique properties of bioactive dental cements.

## THOMAS RAMS

### 1. What projects are you currently working on?

I am evaluating the extent of antibiotic resistance among subgingival and submucosal bacterial pathogens in human chronic periodontitis and peri-implantitis. Additionally, I am assessing the antibacterial effects of dental lasers on periodontal bacterial pathogens.

### 2. Who will this benefit and how?

Patients with chronic periodontitis and peri-implantitis may receive better optimized antimicrobial treatment regimens that are selected based on knowledge of antibiotic-resistance patterns of their targeted pathogenic bacterial species. Additionally, study of the antibacterial effects of dental lasers on subgingival bacterial pathogens may help explain clinical outcomes associated with certain dental laser treatment protocols.

### 3. Are you collaborating with anyone?

I collaborate with Dr. Jon B. Suzuki within the dental school, and outside the dental school with Dr. Arie J. van Winkelhoff, a periodontal microbiologist at the University of Groningen in the Netherlands, and Dr. Jorgen Slots, a periodontist and oral microbiologist at the University of Southern California in Los Angeles.

### 4. What has been your most significant achievement (scientific or not)?

Co-authoring with Dr. Paul Keyes at the National Institutes of Health a series of clinical research studies in the 1980s on microbiologically modulated non-surgical periodontal therapy.

### 5. Favorite scientist/researcher and why?

Dr. Paul Keyes was my first periodontal disease mentor during my dental staff fellowship at the National Institutes of Health in the 1980s. Dr. Keyes, a legendary figure in dental research, is the most decent and intellectually honest individual I have ever met, and an excellent role model, from whom I learned far more than merely how to better treat periodontal diseases with non-surgical anti-infective treatment regimens.



### 6. Tell us about your first science project /experiment:

Study of mutagenic compounds in chlorinated waste water effluent during my master's degree program in environmental health sciences at Johns Hopkins University School of Public Health prior to my dental degree studies.

### 7. What do you hope to accomplish in the future?

Further research studies and journal publications focused on application of diagnostic microbiology, antimicrobial agents, dental lasers, and probiotics in periodontal disease therapy.

## MARK NOVASACK

Conquering Dental School  
With a Little Beef Jerky On The Side**Think you're busy? Think again.**

Mark Novasack is a 32-year-old husband, father of two, former engineer, entrepreneur and full-time, third-year dental student at Temple University Kornberg School of Dentistry.

**FROM ENGINEERING TO DENTISTRY**

After graduating from Lehigh University in 2003 with a Bachelor of Science in mechanical engineering, the Linwood, N.J., native took a job as a design engineer for a consulting firm in New York City. After years in the Big Apple, he switched jobs to a firm in King of Prussia and relocated to Chestnut Hill, Pa., where he lives now with his family.

Novasack was on the fast track to success as an engineer—he had recently earned his professional engineering li-

cense, which is often compared to as rigorous a process as a lawyer preparing for the bar exam.

After seven years working as an engineer, Novasack had a change of heart and decided to pursue a career in dentistry.

**A COMPLETE 180**

During their honeymoon in 2008, Novasack and his wife, Kathleen, talked at length about their dreams and future together. There was a poignant moment when Novasack admitted that he wasn't sure engineering was what he wanted to do for the rest of his life, and he and Kathleen mulled over the idea of his going back to school.

"I looked at the people above me at my job and just realized that I wanted to do something different," he says. It was then that dentistry popped into Novasack's head, and he began to seriously consider returning to school to begin his career for the second time.

No stranger to the dental world, Novasack grew up around the field. His father, George F. Novasack, has run a successful practice in Somers Point, N.J. for years.

"My dad never pushed me into the field, but I always had a feeling in the back of my mind that I might end up becoming a dentist," Novasack remembers. "I wanted to do more—to directly help people and take them out of pain. In my career as an engineer, I wasn't able to do that."

His friends thought he was nuts to give up all he had accomplished as an engineer, but Novasack trusted his gut. He also had the support of the most important person in his life—his wife, who agreed to take on the responsibility of taking care of the family while Novasack pursued his dream.

“Sometimes, you have to make decisions that aren’t popular. I knew this decision was right for me, and I had to follow the path,” he explains.

### PURSUING HIS DENTAL SCHOOL DREAMS

Novasack quit his job as an engineer and began to research his options.

Four days after his daughter Juliette was born, Novasack started a post-baccalaureate program at Penn State Abington in May of 2010 to complete course requirements in biology, chemistry and anatomy before he could apply to dental school.

There, he joined a pre-dental club, where he met Brian Hahn, recruitment coordinator for Kornberg Dental. It was Hahn who solidified Novasack’s desire and drive to go to dental school—specifically at Temple University.

### BECOMING TEMPLE MADE

With the help of Hahn, Novasack enrolled at Temple and never looked back.

One of the factors that drew Novasack to Temple was Kornberg Dental’s focus on clinical experience. “The people we serve at Temple need our help. That’s all I

really needed to know.” he says, speaking of Temple’s patient pool, consisting of a mostly underserved population.

Another reason Novasack chose Temple is because of its strong reputation, not only in the Philadelphia dental world, but nationally and internationally, as well.

“When I tell people I go to Temple, they say, ‘Oh my goodness, Temple makes the best dentists!’” Novasack explains. “Temple grads just know what they’re doing.”

Novasack has nothing but positive things to say about his experience at Kornberg Dental.

“The instructors at Temple are just spectacular. Having gone through four years of engineering school, the teachers I’ve had at Temple are infinitely better than any teachers I’ve ever had in my life,” he says gratefully. “I owe a lot to them.”

### BEEF JERKY

In addition to his full-time studies at Kornberg Dental, Novasack is an entrepreneur, running a business on the side focused on the most unlikely of products: high-end beef jerky.

Every year, Novasack’s parents have a big Christmas party, where every attendee is responsible for





Photography by Michael Persico.

bringing a signature item. After learning how to make beef jerky from a colleague at his old engineering job, Novasack decided, almost as a joke, to make his own beef jerky to contribute to the party. Surprisingly, the jerky was a hit.

For fun, Novasack experimented with different flavors of jerky and eventually looped in his friend and neighbor, Marcos Espinoza. Over drinks in the spring of 2012, they talked about starting a business, with the goal of making beef jerky Philadelphia's next big thing.

After bringing on a third partner, the business got off the ground, officially launching with the name Side Project Jerky, keeping ingredients and production local, working with a butcher in Chestnut Hill and a kitchen in Manayunk.

Buzz began to build—*Men's Journal* magazine included the product in a holiday gift guide and *The Wall Street Journal* mentioned the jerky in a Super Bowl eats roundup. The business is still growing and

the jerky can be purchased from local retailers in Northern Liberties, South Philadelphia and Center City, as well as nationally in New York, Oklahoma and Georgia.

Novasack enjoys melding together his jerky business with his passion for dentistry by using his classmates as a focus group for new flavors. (And yes, in case you were wondering, his classmates DO poke fun at him for the odd mix of beef jerky and healthy smiles.)

#### A BALANCING ACT

"It's not all rainbows and unicorns. There's a lot of family sacrifice," Novasack says, when asked how he balances it all.

Novasack treats his studies at Kornberg Dentistry like he did his career as an engineer. He wakes up early, arrives on Temple's campus long before other students, attends classes and is often the last one to leave at night, after an evening of studying. He prides himself on never doing school-work in his home. He works hard to separate his school life and family life.

However, that balance can't always be achieved. Novasack recalls a recent Father's Day spent studying for finals from 9 a.m. to 9 p.m. when he would much rather have been spending time with his wife, 3-year-old daughter, Juliette and 1-year-old son, Bennett.

"It's been a hectic three years," he admits. "But I know it's all going to be worth it in the end."

#### LIFE AFTER DENTAL SCHOOL

Novasack is looking forward to the day in May 2015 when he completes dental school and can finally become a practicing dentist.

He plans to move his family to Atlantic County, N.J. to join his father's dental practice in Somers Point. In the meantime, Novasack enjoys shadowing his dad when he visits and looks forward to getting to know the patients there and continuing the successful practice his father built.

"After all my family and I have gone through, I'm going to be so well equipped to handle myself as a professional dentist. I'll be able to juggle a full-time job while having freedom and flexibility in my schedule to provide a better life for my family," he says. "That is what I see at the finish line. That's what pushes me through the tough times."



## ALUMNI **Award** RECIPIENTS

The alumni awards program began in 2011 to pay tribute to Kornberg alumni who have made major contributions to society and dentistry in general. Alumni are asked to submit nominations and the Board of Directors of Kornberg votes on the honorees. The awards are presented at Alumni Day each spring.

"These are alumni who have made outstanding achievements in the field of dentistry and are true humanitarians," said Alan Simkins, DMD, chairman of the Awards Committee. "There are over 7,000 Kornberg alumni who are paying tribute to these individuals. It is truly a great honor for the recipients."

### The 2013 Awardees are:

#### **Business Award:**

##### **Neil R. Patel, DMD, '09**

Dr. Patel was recognized for his business accomplishments and passion for innovation. He is the founder and CEO of Molar Geek, a social platform established to create a venue for students, residents and doctors to collaborate in the field of dentistry.

#### **Humanitarian Award:**

##### **Jeremiah J. Lowney, DDS, '61**

Dr. Lowney was recognized for his vision and work with the Haitian Health Foundation (HHF), of which he is founding president. The organization does outreach work in southwestern Haiti, providing full healthcare and disease prevention programs. He was awarded the White House Champion of Change Award in 2013, one of 12 awards given nationally in recognition of humanitarian service.

#### **Leadership Award:**

##### **Arnold S. Weisgold, DDS, '61**

Dr. Weisgold was recognized for his leadership role in the areas of periodontal prosthesis, restorative dentistry, esthetics, implant prosthodontics and occlusion. He is a consulting editor for several journals and received the Saul Schluger Memorial Award for Clinical Excellence from the Seattle Study Club.

#### **Service Award:**

##### **John V. Esposito, DDS, '61**

Dr. Esposito, associate professor emeritus, was recognized for his knowledge, time and effort as a beloved faculty member of the Kornberg School of Dentistry. He was awarded the Xi Psi Phi Fraternity Instructor of the Year eight times and the Student Council Faculty of the Year award at Temple Dental.

In 2006, he established the John V. Esposito, Jr. Scholarship Fund and the endowment was completed in 2013 by the class of 1983 in honor of his service and commitment to the school.

#### **Education Award:**

##### **Edwin L. Granite, DMD, '57**

Dr. Granite was recognized posthumously for his contributions toward the advancement of education in dentistry. He traveled to third-world countries to rebuild faces of needy children in indigent communities. He was honored at the Delaware Academy of Medicine's Annual Meeting and was proud to have the clinic where he practiced at Christiana Care, the Edwin L. Granite, DMD, Oral and Maxillofacial Surgery & Hospital Dentistry Clinic, named in his honor.

#### **Distinguished Achievement Award:**

##### **Beatriz Mirabal-Garces, DMD, '02**

Dr. Mirabal-Garces was recognized, as a colleague of her describes, "for being a gentle soul who represents real understanding and empathy and the ability to reach down and help somebody up." Dr. Mirabal-Garces owns her own practice, The Garces Dental Group. In 2012, Dr. Mirabal-Garces and her husband founded the Garces Family Foundation, an organization committed to helping improve the health and education of the underprivileged immigrant population in Philadelphia and surrounding neighborhoods. The Foundation will also support the Farm to Families program established by the St. Christopher's Foundation for Children.



The Kornberg School of Dentistry  
has much to look forward to following its  
150th anniversary celebration.



*With shared commitment, the*  
**ABRAMSON FAMILY FOUNDATION**

*encourages alumni and friends to  
continue their support of  
the Kornberg School of Dentistry  
as we serve our students and patients  
over the next 150 years.*



## 'WHEN YOU TAKE, YOU GOTTA GIVE BACK'

### Class of 1964's Living Legacy

Their class already had set one precedent: They're the school's biggest supporters relative to their size. So why not set another? "Exactly," thought Alan Simkins.

His idea, which is getting enthusiastic response from classmates, is a \$50,000 endowment for student scholarships. "It honors our class and the school and gives to the students," he explains, "and it could be the first of many endowments as other classes say, 'We don't want to be left behind.'"

The concept hit Dr. Simkins not all at once, but over time. The seed was planted when his father, also a dentist, always talked about giving back. Then the thought continued to grow through Dr. Simkins' years on the Alumni Association, including a term as president and chair of the Awards Committee. Encouragement from a close friend and Alumni Board member, Dr. Leonard Abrams, and from his dental practice partner to serve the school nourished the idea, as did regular contact with his close-knit class.

"We've kept in touch," he says. They've also stayed involved with the school. Five of his classmates have been on the Alumni Board.

Asked what binds the Class of 1964 together so tightly, he points to their backgrounds. "We were from middle-class and working-class families. We knew Temple gave us the opportunity to do things, to raise our children and have a better life."

Pausing for a moment, he remembers a comment of then-dean, Dr. Timmons. "We were sitting in class, and he said, 'Turn to the man on your left and on your right. One of you won't be here for graduation.' But Timmons was wrong about our class. We were motivated and out of 120, most of us graduated."

The handful of vets in the class provided great role models. "They were men in their 30s who had served their country, were serious about school and married with children," he recalls. "We were boys. They made a big impression on us."

He continues, "Many in my class worked two to three jobs while in school. One of us, Irv Snyder, got up at four in the morning to deliver papers before going to class, then worked as a waiter at night and would go back and study. Others were painters in the summer and came back to school in the winter. School prepared us for what life was going to be like."



*Dr. Alan Simkins, '64*

With that kind of work ethic, Dr. Snyder became successful, as they all did. "Coming from New York and Pennsylvania mainly, we've all done well professionally," he says. However, he points out that "if aid had been available, life would have been easier."

Noting the changes at the school now, Dr. Simkins says his classmates are seeing the "180-degree turnaround," and that's another reason for their support. "We want to be sure that students who need help aren't in the same situation we were. We'll have a committee who will pick the students warranting the scholarships."

## Letter from Dr. Robert Levine

Dear Kornberg Alum,

It has been an honor and privilege to serve as President of your Alumni Association for the past year. Sincerest thanks to all for the tremendous support of our 150th Anniversary commemoration. Our Alumni of KSOD are truly exceptional professionals; they are first-rate clinicians, teachers and leaders in local and national dental organizations and a positive force within their communities.

Equally rewarding to me has been the opportunity to work with an extremely dedicated and hard-working board. Together, we composed a **Mission and Action Statement** declaring to all our vigilance and dedication to ensuring the betterment of our students, alumni and school. Additionally, the Alumni Association board launched a bold, new **"Mentoring for Life" Program** for our students to establish with alumni mentors lifelong relationships, beginning with the students' first day of school and continuing through their transition to professional life and beyond. The main goal being to inspire personal growth, encouraging volunteerism, vision for the future, cultural sensitivity and philanthropic awareness, all values reflected in the core of the dental profession. On a professional level, mentors will provide guidance to the mentee on residency/specialty programs, job searches, and networking opportunities. To date, over 200 students have signed up with over 80 mentors.

As your Alumni Association President, I have been asked to help organize Temple's first annual **Global Day of Service on Saturday, November 9, 2013**. Global Day of Service is designed to unite Temple alumni and friends worldwide in community service on a single day. On November 9th, a dental phone-a-thon will be held at the KSOD, reaching out to fellow alumni, with the goal of raising funds for needy patients unable to pay for advanced services at the school (e.g., periodontal and dental implant therapy and prosthetic reconstruction).

The Alumni Association serves as a liaison to improve communication between the dental school and its

alumni and to foster positive relationships among administration, faculty, alumni and students. Alumni reconnect with the school and each other at programs and social events organized by the Alumni Association. Additionally, the Dental Alumni Association supports and provides social



and professional opportunities for today's dental students through a number of worthwhile student activities such as the freshmen bbq, white coat ceremony, mentoring programs, international outreach programs, alumni golf outings, and hospitality suites for student examinations. This is only made possible with your financial support.

**Our Dean, Dr. Amid Ismail, is transforming our school, moving forward with a strategic vision and unwavering commitment to create a true patient-centered and comprehensive dentistry model, one that honors the experience of our alumni and creates the most advanced and comprehensive learning experience to educate dentists for the next century.** With your help, we can preserve the great traditions of Temple University's Kornberg School of Dentistry and ensure its future development and growth.

Remember, all alumni receive a discount on Continuing Education classes. Visit <http://dentistry.temple.edu/alumni> to view upcoming CE programs and alumni events.

With sincere best wishes,

Robert A. Levine, DDS, FCPP, Class of 1981  
 President, KSOD Alumni Association  
 Clinical Professor in the Department of Periodontology  
 and Oral Implantology  
 Temple University Kornberg School of Dentistry

## ALUMNI ASSOCIATION BEGINS “Mentoring for Life” PROGRAM

The Kornberg School of Dentistry’s Alumni Association recently partnered with the school to begin the new “Mentoring for Life” Program, in which students would be paired with alumni mentors in the surrounding Philadelphia area. The idea, first originated by Alumni Association President Dr. Bob Levine, was to have each freshman student paired with an alumnus who had been through the same experience the student had gone through. The mentor’s responsibility would be to guide the student from year to year, helping them transition from those tough didactic basic science courses, encouraging them along the way, and into the rigorous clinical assignments. Eventually, the student would come to the mentor for advice on GPRs, job interviews and postgraduate work. The whole idea is for the mentor and student to share a bond throughout their professional careers.

In the beginning, the “Mentoring for Life” program’s goals were somewhat limited; the goal was to match freshmen with willing alumni mentors in the area. However, after members from the Alumni Association spoke with students about the program, the association soon came to notice that there was a need for mentors not only in the freshmen class, but for all classes. A registration web page for mentors and students was created and over 200



students signed up with around 80 mentors in the area participating. Because of the overwhelming participation of students, the Alumni Association decided to pair various students with each mentor so the students could also mentor each other, much like a learning community. For example, a senior and junior might be paired with the same mentor allowing the junior to benefit from having a senior mentor and an alumni mentor. The registration page also allowed students to make specific requests for mentors, based on specialty practice, geographic area and whether they practiced dentistry as an active duty officer in the military.

During the course of the mentoring program, students and mentors will be asked to meet at the school at the beginning of the

year to go over the details and benefits of the program while introducing the students to their mentors, and also at the end of the year to wrap up the year and share experiences. Throughout the year, the mentors and students will meet at their own mutually agreed-upon times.

If you are interested in becoming an alumni mentor for the 2014-2015 school year, please visit <http://dentistry.temple.edu/mentoring> for more information.

## MORE THAN JUST DENTISTRY

### JUDEE HASHEM-RAPOZA, DMD

#### The patient-centric approach

Judee Hashem-Rapoza, DMD, Class of 1990, whose general dentistry practice in Plymouth Meeting, Pa, promotes overall health and wellness, thrives on this very simple notion.

"It is my practice to treat the patients as human beings first, through caring and listening," she says.

The guiding philosophy of Dr. Judee's alternative dentistry is that the health of the mouth and the body are one and the same. According to Dr. Judee, as she is called by her patients, oral health is a vital component of the "whole body" and optimum health. Dr. Judee's practice takes into consideration the cause-and-effect relationship between a patient's oral health and the health of the rest of the patient's body—for example, the well-documented link between periodontal disease and heart disease.

Dr. Judee achieves her mission by employing a patient-centric practice that fosters trust and open dialogue. "People are anxious about going to the dentist for different reasons, including worrying about the effectiveness of localized anesthetic and feeling that the dentist is rushed or is neglecting their concerns," she says. "Other factors include anticipation of pain, negative past experiences and even the sterile smell of the dental office. Interrupting the normal day's routine to visit the dentist also is a factor in general anxiety.

#### Together as a team

Dr. Judee opened her practice in 1992 with one chair and 10 patients. Today, her practice is a tremendous success with over 6,000 patients and a staff of four that shares her whole-patient philosophy.

"We work together as a team," she says. "It is our goal to make sure every patient has a positive experience. My staff and I are down to earth and really focus on our patients and their lives. We need to make sure they feel comfortable, so we tend to their physical and emotional needs."



*Dr. Judee Hashem-Rapoza (center) with her daughters Madeline (left) and Liza (right).*

Indeed, studies have shown that the most important factor in overcoming dental anxiety is good dentist-patient communication.

"If I had the opportunity to convey one message to the new students entering the profession of dentistry, I would tell them that they are caring for human beings who have emotions and fears," she says. "Our job is to find out what they fear and talk to them about it and ease their anxieties."

Dr. Judee also emphasizes patient trust at her practice. She places value in the word, making sure that every patient feels confident that she always has their best interest at heart. "Patient trust is of utmost importance to me and ultimately results in patient satisfaction. Trust is the foundation of a successful patient-dentist relationship, as with all other relationships."

More than anything, Dr. Judee sees herself as a healthcare professional who takes pride in her profession. "I am not a salesperson," she notes. "My mission is to provide outstanding care to each patient as it pertains to their individual health, age, chief complaints, and diagnosed pathologies all while considering their budget."

Dr. Judee adds, "I love what I do. Caring for human beings is very natural to me. It's simple, I LOVE PEOPLE. I enjoy going to work every day."

# The Shore Family

"SHORELY" PROUD OF DENTISTRY

The Shore legacy at Kornberg School of Dentistry began with a cousin graduating from the school in 1930. The tradition continued year after year, captivating generation after generation of the family, with nearly 20 relatives who have been Temple-trained dentists and hygienists. Dr. Joseph Shore, the founder of the Shore-Snyder Dental Center in Norwood, Pa., grew up in the Strawberry Mansion section of Philadelphia and ultimately settled in Haverford with his wife, Bette Mandel Shore.

The Shore-Snyder Dental Center truly is a family affair. Bette served as the practice's book-keeper from when Joseph first opened in 1952 until last year. Joseph was joined by his brother, Leon, who passed away in 1983, and eventually by his son, Jeffrey, in 1979. Joseph's grandson, Andrew, now works with his father and grandfather, and the practice recently welcomed Robin, Joseph's granddaughter, after her Kornberg graduation this past May.



Three generations: Andrew, Robin, Joseph, and Jeffrey at Robin's 2013 graduation ceremony.

## The Patriarch

Joseph practiced dentistry for over 62 years and retired only one year ago. While he has many fond memories and reasons to thank Temple School of Dentistry (it was renamed Kornberg School of Dentistry years after Joseph earned his degree), he was not always on the path to becoming a dentist. Originally, Joseph planned to become an accountant. However, he received a letter from his cousin during WWII which convinced him otherwise. Joseph hasn't looked back since, and recently published his autobiography.

Joseph credits Temple with preparing him to dive headfirst into opening his own private dental practice immediately after graduating. He felt completely comfortable performing all of the dental procedures he

learned during his time as a student. Joseph believes Temple is such a wonderful place because of its faculty. He remembers his instructors taking the time to assist and invest in him and his classmates, truly making sure they understood the material. He acknowledges that "they were tough on us...I went to bat for my fellow students because I was way ahead of them in my requirements and they respected me. Many of the instructors would hang around my area, and they would talk to me." While Joseph recognizes how helpful he was to his peers, he identifies them as one of his favorite aspects of his time in dental school.

Joseph points out that much has changed in dentistry since he first entered the field. He explains that while most of today's dentists practice in group settings, this was not the case years ago. He



In 2010, Andrew received his diploma from his father and grandfather.

feels that “it makes a big difference starting in a group practice, learning various techniques from each other, giving you more confidence.” Joseph also shares the changes that have evolved in patients themselves. “Patients are no longer afraid of dentistry. They know that dentistry is not going to kill them. Many want to come in to have their teeth cleaned more often than every six months.” He goes on to explain that the Shore dentists try to help parents teach their children that dentistry can be fun and is not painful; they even let young patients squirt the water hose into their parents’ mouths.

As can be expected based on Joseph’s generosity toward his classmates, he was equally generous, if not more so, to future Temple students; he volunteered and taught in the school for 10 years. Joseph was extremely involved in the dental fraternity Sigma Epsilon Delta (SED). He served as president as a student, went on to become president of the Philadelphia chapter and was eventually elected president of the national brotherhood. SED began a Cleft Palate Clinic in Israel which services Israeli and Arab children.

It was Joseph’s happiness practicing and teaching that became apparent to Jeff and showed him what a wonderful career dentistry could be. Joseph feels extremely fortunate to have his progeny working with him and admits he



*The 2012 Temple dental mission group in Samana, Dominican Republic.*

becomes teary thinking about having his son and grandchildren in the practice.

### **The Middle Generation**

Dr. Jeffrey Shore followed in his father’s footsteps not only in becoming a passionate dentist, but also by returning to Kornberg to teach future dentists. He shares: “Besides being able to watch both my children progress through four years each at Kornberg, teaching has been one of the most rewarding experiences of my life. Showing students ways to approach problems they might encounter in practice and seeing their interest in learning is truly rewarding.”

It is instructors like Jeff who help make a Kornberg dental education so outstanding. “With both full-time and adjunct professors employed, the students can see and learn methods used both in school and in real environments outside the classroom.”

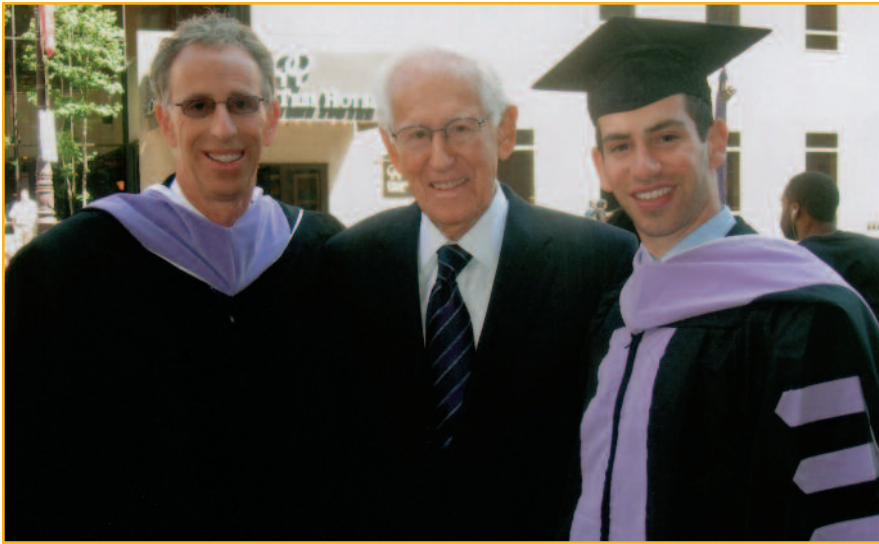
Jeff identifies both his social and clinical experiences as two high-

lights of his time at Kornberg. By living on campus, he formed bonds with classmates, many of whom he still sees at reunions and is in touch with today. In explaining the excellence of the Temple program, Jeff elaborates: “With a wide range of patients to draw from and being a clinically oriented school, the opportunity of experiencing patients who required simple to complex needs was afforded to me.”

In addition to practicing and teaching dentistry, Jeff leads a dental mission to the Dominican Republic. Through this program, six or seven fourth-year Kornberg dental students travel to the Dominican Republic for a week and provide free surgical and restorative dental care. Both Andy and Robin participated in the mission during their fourth years. Jeff also serves on the dental assisting advisory board at Marple Newtown High School.

When asked what he would impart to future dentists, Jeff





Adjunct professor Dr. Jeffrey Shore, with father, Joseph, and graduating son, Andrew.

shares: "Dentistry is an occupation that they will enjoy forever, whether they have their own practice or work for someone. It is a rewarding career." This is clearly something that Joseph has demonstrated and that Andy and Robin have recognized.

### The Young Dentist

Dr. Andrew Shore can't choose just one highlight from his years at Kornberg. First and foremost, he identifies learning under his father during the first year of clinic as one of his greatest memories. He also recalls how amazing it felt the first time he completed difficult procedures (such as a full-mouth extraction with immediate denture placement), placing multiple three-unit bridges, and finishing a molar root canal. Last but not least, graduation, the culmination of his years and lessons, stands out among the many treasured times.

Andy shares that Kornberg is such a special, strong program because of the way it prepares students to diagnose and treat cases effectively. He was highly impressed with how ready and confident he felt working with patients so soon

after graduating. He further states, "It's the students' clinical experience and ability to use those methods that make the school so well respected." Andy's education was so stellar that he credits the actual learning of his "forever craft" as the most enjoyable part of his four years.

While Andy did not originally intend to become a dentist (he was a business major as an undergraduate and changed his course when the economy declined), he is clearly happy with his career choice and subscribes to his father's earlier message as he shares: "According to many news outlets, being a dentist is the number one profession, and I'd agree with that. I'm grateful for the knowledge I received at Kornberg—it was invaluable."

### The Newest Dentist

Unlike her grandfather and brother, Dr. Robin Shore knew early on that she wanted to work in the medical field. Her exposure to dentistry from so many family members gave her the confidence that she would enjoy practicing. The closeness of her family was also appealing as she explains: "I

loved that my dad and grandfather worked alongside each other and built a stronger relationship because of it. I wanted to be able to experience that with my dad and brother." She was excited to join the family's practice so she could make her grandfather proud.

Like her grandfather, father and brother, Robin recognizes how wonderful the faculty and students at Kornberg are. She explains that her instructors were always available to help and fully understand the hardships of being a dental student. She describes her classmates as being down-to-earth but enjoying life outside the classroom. "Overall, everyone at Kornberg truly cares about one another."

Robin's classmates enter the picture again when she describes the highlights of her years at Korn-



When not practicing, the Shores are diehard Eagles fans.

berg. She recalls celebrating finishing boards, participating in sports leagues and taking part in the Dominican Republic mission.

Similar to Andy's praise of the school's education, Robin feels prepared to act quickly and appropriately in difficult dental situations. "Besides the spectacular, supportive faculty, I credit the quality of my experience to the school's requirements and population of Temple patients. Kornberg produces the best general dentists in the area, possibly even the country."

As indicated when she shared memories of her dental school experience, Robin was highly involved in student life. She was elected secretary of her class during her fourth year, was president of the Dominican Republic Outreach Club, served as social chair and president of the American Association of Women Dentists and was an honor board member for two years. Most recently, Robin was selected as a member of Omicron Kappa Upsilon, the national dental honor society. Only 10 members are chosen from each class; this is considered by some as the highest honor for a student.

It is clear that Robin is a people person, so it comes as no surprise that she has decided to pursue general dentistry because of "the ability to build relationships with patients over a long period of time."

### Family Pride

If it isn't apparent from the practice's composition, the Shore family likes spending time together. They are an athletic bunch of avid Philadelphia sports fans (primarily Eagles and Flyers) and have held Eagles season tickets for decades. When the family isn't practicing dentistry, giving back to the community or cheering on Philadelphia teams, they turn their attention to animals. In the last 23 years, they have rescued six greyhounds and currently care for Chloe and Casey.

Similar themes arise when Joseph, Jeff, Andy and Robin talk about their dental school memories and views of why a Temple dental education is so superior. They have each made the most of their time in the program, both as students and as faculty, gleaning excellent experiences. It is no wonder they

all take so much pride in being a part of the school and the Shore dental legacy.

The Shore family is proud to have so many Temple-educated dentists in its ranks, and they are equally proud to have created such a strong family practice. They are truly bonded.



Joseph and Robin at Robin's White Coat Ceremony.



Andrew, Jeffrey, Bette, and Joseph at Andrew's White Coat Ceremony.

# Remembering Joan Ballots

Dental School and University Supporter



*Generous philanthropist, university trustee and outstanding alumna Joan Ballots died last December after a long illness.*

Tilghman Moyer, Temple's interim senior vice president for institutional advancement, reflects on the first occasion that he spent time with Joan Ballots. Passionate about any team that wore the Owls uniform, especially on the basketball court, Ballots had traveled to South Carolina for the first-ever Charleston Classic. The year was 2008, and the men lost to Clemson. But what Moyer fondly remembers is being part of a golf foursome with Ballots. They played two rounds on one of Kiawah Island's championship courses, enough time to get to know each other. Although Ballots' reputation as a legendary Temple supporter and alumna had preceded her, Moyer was drawn to her "incredible passion and belief in the university."

Last December, Temple lost this trustee, donor and enthusiastic sports fan when Ballots died after a long illness. "She's missed by lots of people," emphasizes Moyer.

Her affection for the school was in her family's blood, she once said in an interview. In the 1890s, her grandfather took classes from Russell Conwell, Temple's founder and first president. Then her father attended Temple before entering medical school. Even her late husband, John, '57, whom she met while both were counselors at a summer basketball program of the university's coach, Harry Litwack, went to Temple, graduating from the Dental School.

Ballots' student days were marked with achievements: involvement with student government, playing on four varsity teams and recognition as an outstanding senior. After graduation, she took her degree in education and moved to New Canaan, Conn., where she became a middle school teacher and coach while John started a dental practice. "His practice was a significant part of their lives," points out Moyer. "It was in their home, and she was involved with the business as record keeper and business manager."

However, she remained involved with the university. She and her husband quietly provided scholarship dollars for students of the Dental School, because they believed in the vital importance of making financial aid available. In recognition, a dental preclinical lab was named after them in 2006.

After her husband's death in 1990, Ballots expanded her leadership. "I've seen what good schools can do," she's reported as saying. So she helped underwrite efforts to build partnerships with schools in the Temple community. She also served on the Dental School's Board of Visitors, a role she highly valued because of John's great appreciation for his dental education. She became a member of the university's Board of Trustees,

serving on many committees, including searches for two former presidents. For the Urology Department, which treated her husband, she offered additional support.

Athletic programs, always close to her heart, benefited too from her philanthropy. The woman who maintained a Philadelphia residence just so she could attend every basketball (and football) home game supported coaching positions for men's and women's basketball. Then she stepped forward for many capital projects,

such as construction of the Liacouras Center and the women's basketball court.

But it's her presence at the games that will be missed as much as her advocacy. "You always knew she'd be there," says Moyer, "truly bleeding cherry and white, touching generations of student athletes."

As serious about making a difference in the classroom as on the court, Ballots was "a fixture at the university

for decades," noted Acting President Richard Englert upon her death. "Joan has always been concerned about our tremendous students and was never happier than when she was in their company."

Board of Trustees Chair Patrick O'Connor added:

"I've worked with Joan for many years and will miss her passionate participation at our board meetings and her love of Temple."

"It was always about the students, the programs, the athletes and the university," remembers Moyer, "not about Joan. She was selfless in her dedication."

For that loyalty, in 1989 she received the F. Eugene Dixon, Jr. Inspiration Award. It was an honor of which she was especially proud.

**"In my mind, she was a pioneering woman. For years, she was one of only a few female leaders the university had. She spoke her mind, and for someone who came from a generation that didn't fully value the contributions of women outside the home, that was unusual. But she never wore it on her sleeve."**

Tilghman Moyer, interim senior vice president for institutional advancement

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TEMPLE DENTAL ALUMNI DISCOUNT 15% (UNLESS OTHERWISE NOTED)

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*Nitrous Oxide Sedation  
(HANDS-ON)*

Dr. Stanton Braid and  
Dr. Allen F. Fielding

**Wed., Mar. 12, 2014**

*Dental Management of  
Emergencies and  
Medically Compromised  
Patients*

Dr. Gary Jones and  
Dr. Allen F. Fielding

**Fri., Mar. 21, 2014**

*2nd Annual Engine  
Driven Instrumentation  
in Endodontics – Panel  
Discussion*

Moderator: Dr. Cemil  
Yesilsoy

Speakers: Dr. Chris Glass,  
Dr. Eric Herbranson and  
Dr. Martin Trope

**Wed., Apr. 2, 2014**

*Updates in Pediatric  
Dentistry: Treating Tiny  
Tots to Teens*

Dr. Lance Kisby

**Fri., Apr. 18, 2014**

*Feel Good Dentistry –  
A Sane Approach to  
Esthetic Dentistry*

Dr. Steven Weinberg

**Fri., May 16, 2014**

*Limiting Exposure in the  
21st Century Dental  
Practice*

Dr. Michael Ragan



## DO YOU HAVE A STORY TO SHARE?

We are looking for alumni to interview for the next *Diamond's* Alumni Spotlights and we would love to hear from you. Please contact Editor Ashley LaRosa at 215.707.9005 or [alarosa@dental.temple.edu](mailto:alarosa@dental.temple.edu).

 Kornberg School of Dentistry  
TEMPLE UNIVERSITY

3223 North Broad Street  
Philadelphia, PA 19140  
<http://dentistry.temple.edu>

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**Dean**  
Amid I. Ismail

**Director, Development**  
Jennifer Jordan

**Editor**  
Ashley LaRosa

**Contributing Writers**  
Kyle Bagenstose  
Meg Cave  
Leslie Feldman  
Jessica Lawlor

**Design**  
Cynergy Integrated  
Cynthia Busbee  
Janice Ellsworth

**Photography**  
Ryan Brandenburg  
Joseph Labolito



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