



# LOOKING BACK, MOVING FORWARD

Q&A WITH DEAN DENIS KINANE  
AS WE LOOK BACK ON HIS TENURE

SERVING AT THE HELM of Penn Dental Medicine since July 2009, Morton Amsterdam Dean Denis Kinane shared with the Penn Dental Medicine community this summer that he will be stepping down from the deanship at the end of December to pursue new professional opportunities. In this leadership transition, Dr. Dana Graves, Vice Dean for Scholarship and Research, will serve as Interim Dean, effective January 1 and until a successor for Dean Kinane has been appointed. As Dean Kinane moves on, he leaves Penn Dental Medicine strong and well-positioned for the future.

“It has been a tremendous honor and pleasure to serve this great institution and to work with the entire Penn Dental Medicine community and colleagues throughout Penn,” says Dean Kinane. Indeed, in collaboration with faculty, staff, students, and alumni there have been significant advances, focused on the shared goal of moving the School’s mission forward. On the pages that follow, we highlight some of the key initiatives implemented in the areas of education, research, and patient care since 2009.

As we look back over the time of Dean Kinane’s tenure, the *Penn Dental Medicine Journal* also asked him to share some thoughts on dentistry and dental education going forward.

#### What do you see as some top trends in dentistry now and into the future?

While all areas of dentistry are advancing in quite a dramatic fashion right now, one area that stands out and crosses multiple disciplines is the major impact of digital technology. Digital work flow and CAD CAM are changing the way we practice now and into the future — from enhanced case planning to advanced esthetics. In similar ways, cone beam computed tomography has been an immense breakthrough in the last 10 years; it too is used across specialties and I foresee it becoming even more ubiquitous with new advances.

In terms of clinical provision, I think access to care for underserved communities will continue to be a public health challenge. We will have to devise new ways and new personnel to deliver that care, and be supportive of innovative means of care provision.

#### What areas do you see impacting dental education going forward?

What we teach has to support current and future dental practice, and the Penn Dental curriculum does that. I think one area that cuts across education generally is the major change in the pedagogy. What we have been able to do here at Penn Dental Medicine

is flip the classrooms and create videos of most of the lectures, so students can view and review them at their own pace. I imagine that live lectures will still be important into the future, but think people will accept that in many cases students will be able to look at the recorded media rather than the live performance. Incorporating this pedagogical philosophy into our new curriculum has had tangible results, and we are already seeing even more remarkable performances for our students on national examinations.

In addition, the whole explosion of digital media means students can share and access information more readily and this won’t stop after they graduate. Whether it is expert advice on diagnosis, treatment, or prevention, the exchange of information will be in real time. What will be very important in those scenarios is the ability to recognize quality, evidence-based resources — so critical thinking and discernment will become even more important, while the extent of information committed to memory may change. I think we will gradually accept that our ways of thinking in the future will be much more about asking the right questions, finding the best source of knowledge, and discerning quality; it will be much more interactive, with the knowledge

that we have this reservoir of information out there that can help us with decisions. We will still need to know the basics, the vocabulary and what the information means, but essentially the extent to which our memories will be silicon or neurobiological will be the question.

#### As one looks to the future of dental research, are there any areas with particular potential for advancing patient care?

As a world community in dentistry, we have made major advances in caries and periodontal disease, but much less so in oral cancer, and I think we can do a lot in this area. Historically, dentistry in the U.S. has somehow given the lead in oral cancer to otorhinolaryngology departments, but I foresee potential growth in an approach to oral cancer that is dentally led. Dentists are uniquely skilled to advance care in this area — whether it be in reconstruction, uncovering the etiology and pathogenesis of oral cancer, or in rehabilitating patients’ oral function and relief of pain following surgery, radiotherapy, and chemotherapy, particularly when the dentition and/or salivary glands are compromised.

#### In regard to your tenure as Dean, what single thing has been the highlight of this role?

That is a tough question, yet our stellar students stand out as one of the very best parts of this position in the sense of seeing them develop from undergraduates to skilled dentists and being part of their career development. Sharing in the School’s rich history with the 100th anniversary of the Evans Building and seeing it transformed for the next generation of students has also been tremendously rewarding. All in all, it has been a very change-driven time for the School and the faculty, staff, and students, indeed everyone, has been incredible in supporting that process. Our success has been through allowing the excellence of the Penn Dental community to exert itself and shine through. Together, we have made changes across the board in research, teaching, clinical provision, and service and have been able to do it in a fiscally efficient manner with unprecedented support from our alumni and major donors. I thank Penn for this extraordinary experience.

# EDUCATION

*Some highlights of academic initiatives carried out over the tenure of Morton Amsterdam Dean Denis Kinane.*



## HONORS PROGRAMS

Designed to cultivate a leadership outlook in exceptional students who meet the academic requirements, the honors program was launched in **2010** in the areas of research, community health, and clinical dentistry, and has grown since then to include medically complex, radiological sciences, and oral and maxillofacial surgery honors as well. At the start of this 2017 academic year, there were 161 students pursuing one or more honors with their DMD.

## ADVANCED SIMULATION

Virtual reality advanced simulation units employing haptic technology were added to preclinical instruction in **2014**.



## GLOBAL ENGAGEMENT

In **2010**, Dr. Syngcuk Kim was named to the newly created post of Associate Dean for Global Affairs to help advance Penn Dental Medicine's global engagement. That year, the school was among a delegation to Beijing led by Penn President Amy Gutmann, part of another she led to Seoul in 2011, and also participated in the Penn Wharton China Center opening in 2015. Since 2010, the School has signed 30 memorandums of understanding, including 22 in Asia, 3 in South America, and 5 in Europe.

## INTERPROFESSIONAL LEARNING

Building on its interprofessional educational opportunities with other Penn schools, Penn Dental Medicine added a MS in Bioengineering to its dual-degree options in **2011** and continued to expand the offerings with a JD in Law and an MBA in **2012**, and a MS in Translational Research and a Master of Law in **2014** — bringing the total to 8 dual-degree options.



## LEARNING TECHNOLOGIES

A Learning Technologies Team was created in **2014** to integrate online resources into the curriculum — from recorded lectures/tutorials and online testing to gamification and course eBooks (currently there are 52 course eBooks). **Since 2015**, all DMD students receive iPads and are required to bring them to class as blended learning continues to transform the way courses are taught and students learn. Also since 2015, two Massive Open Online Courses have been developed through the online platform Coursera.



## EXPANDED PEDIATRICS

In **2014**, the pediatric residency program doubled the number of residents accepted each year to 4 and the clinic expanded as well with a new open bay, adding 6 chairs.

## NEW CURRICULUM

A new curriculum was implemented with the start of the **2015** academic year for first-year students. It reflects an emphasis on the integration of scientific information; enhanced small-group, case-based learning; and more clinical rotations throughout the first two years. Major improvements in national exams are already being realized.



## REIMAGINED LIBRARY

The reimagined library, part of the \$37 million Evans Building Centennial Renaissance project that transformed all four levels of this historic structure, opened in **March 2016**, occupying space on the 2nd and 3rd floors. With a focus on digital resources, the main reading room on the 2nd floor is in the library's original location when the building opened in 1915.



## SIMULATION CLINIC

The new preclinical simulation clinic, also part of the Evans Building Centennial Renaissance project, opened in **August 2016** in the lower concourse of the Evans Building. The high-tech facility features 90 workstations, each outfitted with a simulation unit and a monitor for instructional videos and streaming of live demonstrations.

## CHEUNG AUDITORIUM

The former B-60 in the lower concourse of the Evans Building — one of the most heavily used academic spaces in the School — underwent a complete renovation, opening in **January 2017**.

With a leadership gift by Dr. William Cheung (D'81, GD'82) to make the renovation possible, alumni can still name a seat in the space at [www.dental.upenn.edu/takeaseat](http://www.dental.upenn.edu/takeaseat).



## STUDENT-CENTERED LOWER CONCOURSE

Eight small group study rooms, 4 seminar rooms, a student lounge, and the Offices of Student Life and Academic Affairs are among the new spaces in the renovated lower concourse of the Evans Building, completed in **January 2017**. Part of the Evans Building Centennial Renaissance, it created an area fully devoted to student services and support.

## NEW PROSTHODONTICS PROGRAM

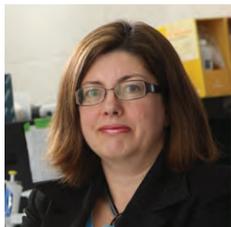
In **July 2017**, a new advanced specialty program in prosthodontics welcomed its first class of residents.

# RESEARCH

*Some highlights of research-related initiatives advanced over the tenure of Morton Amsterdam Dean Denis Kinane.*

## FACULTY RECRUITMENT

Since 2009, the depth of the School's research enterprise has been bolstered by a focus on recruiting research faculty across the basic and clinical sciences, including:



**Dr. Claire Mitchell**  
*Dept. of Anatomy & Cell Biology (in 2009)*



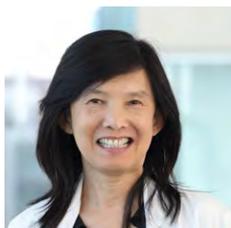
**Dr. Dana Graves**  
*Dept. of Periodontics (in 2010); he was also named to the newly created post of Vice Dean for Research and Scholarship in 2013.*



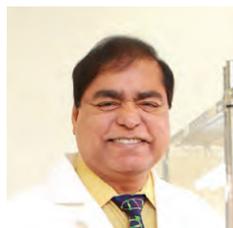
**Dr. George Hajishengallis**  
*Dept. of Microbiology (in 2012)*



**Dr. Betty Hajishengallis**  
*Div. of Pediatric Dentistry (in 2012)*



**Dr. Anh Le**  
*Dept. of Oral & Maxillofacial Surgery/ Pharmacology (in 2012)*



**Dr. Henry Daniell**  
*Dept. of Biochemistry (in 2013)*



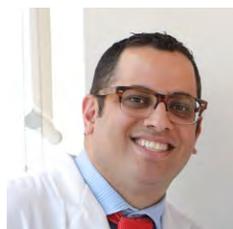
**Dr. Hyun (Michel) Koo**  
*Dept. of Orthodontics, Divs. of Community Oral Health & Pediatrics (in 2013)*



**Dr. Songtao Shi**  
*Dept. of Anatomy & Cell Biology (in 2014)*



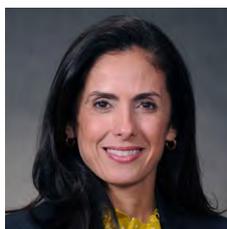
**Dr. Shuying (Sheri) Yang**  
*Dept. of Anatomy & Cell Biology (in 2016)*



**Dr. Rabie Shanti**  
*Dept. of Oral & Maxillofacial Surgery (in 2016)*



**Dr. Ricardo Teles**  
*Dept. of Periodontics (in 2017)*



**Dr. Flavia Teles**  
*Dept. of Microbiology (in 2017)*

## SCHOLARSHIP

The number of fully published articles by the School's full-time, standing faculty increased from a total of 62 articles in **2009** to a total of 160 in **2016**.



## DSCD PROGRAM

With the goal of preparing students for a research-focused academic career, the School launched a DScD program in **2011**. Presently, there are 15 students in the program; a major success in "growing" new faculty, 3 recent DScD graduates (all women) have joined the School's faculty.

## PATENTS

Since **2012**, 21 provisional patents were filed by Penn Dental Medicine faculty and 13 US patents issued.



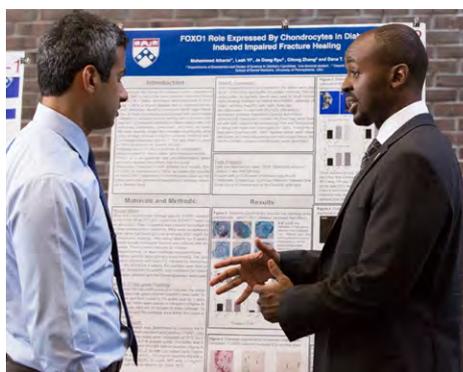
## RESEARCH SYMPOSIA

The School brought together leading researchers and clinicians, hosting 13 major research and clinical symposia at Penn **since 2012**, including:

- Penn Esthetics Symposium (2012 and 2015)
- 5th International Congress of Adhesive Dentistry (2013)
- Penn Periodontal Conference (2013, 2015 and 2017 [see 2017 highlights, page 38])
- ARONJ: An Update (2014)
- Endodontic Retreatment: Surgical and Non-Surgical Management (2014)
- World of Oral Medicine (2015)
- TMJ A to Z (2015)
- Penn Week of Orthodontics (2016)
- Just Bond It! (2017, see highlights, page 40)
- Penn Stem Cell and Regenerative Dentistry Conference (2017, see highlights, page 44)

## NEW MSOB TRACK

An evidence-based learning track for the Master of Science in Oral Biology (MSOB) was introduced in **2015**, providing a non-laboratory-based research option for earning a MSOB.

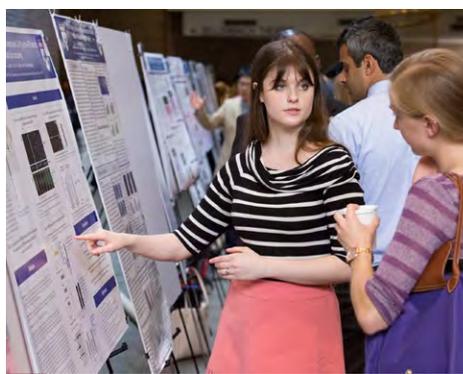


## ADR TRAVEL AWARDS

This new initiative to build opportunities for students and junior researchers to present their research on a national/international stage launched in **2014**, sending students/junior researchers to the annual AADR meeting each year since.

## PENN CHINA RESEARCH & ENGAGEMENT FUND (CREF) AWARD

Penn Dental Medicine was among the inaugural recipients of a CREF grant from Penn in **2015** to support three high-level research symposia and a conference on the delivery of dental care in China at Penn Wharton China Center in Beijing. The first symposium, on the topic of bone biology, was held in **2016**, and second, on biofilm, took place in September **2017** (see page 5).



## RESEARCH DAY LAUNCHED

In **2016**, Research Day launched to bring together the School community annually to spotlight both faculty and student research in one event (see highlights of Research Day 2017, page 37).

# PATIENT CARE

*Some highlights of patient care initiatives carried out over the tenure of Morton Amsterdam Dean Denis Kinane.*

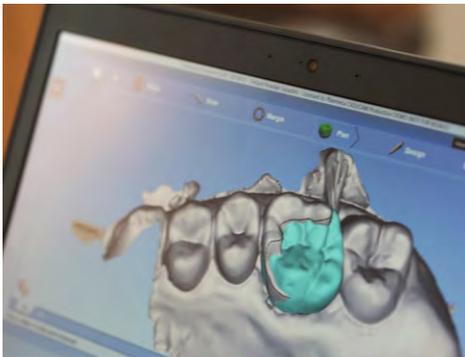


## PREVENTIVE CARE PROGRAM

In **2009**, the Div. of Community Oral Health piloted its first dental sealant program with one West Philadelphia school, and today has expanded to provide educational and preventive care services to complement the comprehensive dental care provided on the PennSmiles bus to serve 14,000 children in 24 schools this past year.

## CENTRAL PATIENT REGISTRATION

Streamlining patient management, a central patient registration area was created in **2010**.



## GOING DIGITAL

Digital radiography was introduced within the School's clinics in **2010**, the same year the School's CAD/CAM Ceramic Center expanded to accommodate a growing inventory of state-of-the-art equipment. Soon after, patient records became fully electronic; and now all DMD students gain experience using intraoral scanners as the School continues toward complete digital work flow.



## ADVANCED DENTAL CARE CLINIC

Designed to manage advanced cases in restorative and esthetic dentistry, the William W. M. Cheung Advanced Dental Care Clinic opened in **2010**. This new 15-chair clinic has been the home of the DMD clinical honors program since its opening, and since July 2017, residents in the new prosthodontics program also see patients here.

## LIFE CENTER

In collaboration with Penn's School of Nursing, Penn Dental Medicine opened a dental clinic at the LIFE Center in **2011**, serving the needs of geriatric patients and expanding students' clinical experiences with elder, medically complex individuals. Third- and fourth-year students rotate through the clinic.



## SAYRE HEALTH CENTER CLINIC

The School opened a clinic within Penn Medicine's Sayre Health Clinic in **2011**, providing comprehensive dental care alongside doctors and nurses in this West Philadelphia clinic. Second-, third- and fourth-year students rotate through the clinic.



## SYNGCUK KIM ENDODONTIC CLINIC

With the opening of this new clinic in **2013**, the School opened the doors to one of the most high-tech clinical settings for endodontic instruction and patient care.



## PENNSMILES

In **2013**, the PennSmiles mobile dental vehicle marked 10 years of bringing comprehensive dental care to children in West and Southwest Philadelphia, and the program expanded with a second bus this fall (see story, page 3). Presently, the PennSmiles program works with 24 schools within approximately 24-square-miles of Penn.



## EDWARD & SHIRLEY SHILS CLINIC

Part of the Evans Building Centennial Renaissance project, the Edward & Shirley Shils Clinic opened in **September 2016**. This new 57-chair general restorative teaching clinic is situated in the southwest section of the first floor of the Evans Building.



## PENN DENTAL FAMILY PRACTICE

The University City location of the Penn Dental Family Practice joined Penn Medicine University City at 3737 Market Street in **2015**, adding dentistry to the multitude of health care specialties within this outpatient facility. The three Family Practice offices provide dental care for the majority of Penn employees and students.

## ORTHO CLINIC EXPANSION

Completed in **June 2017** with alumni support of the Penn Ortho Centennial Campaign, a reconfiguration of the clinic space added four new treatment areas. Other changes included the remodeling of the waiting area and improved digital capabilities.



## MAIN CLINIC RENOVATION & SCHATTNER PAVILION

Made possible by a \$15M gift from the late Dr. Robert Schattner (D'48), the School's Main Clinic (to become the Robert I. Schattner Clinic) is undergoing a complete renovation for an improved patient and student experience; the transformed space will be completed by the close of **December 2017**. And with a projected completion date of **June 2018**, the Schattner Pavilion will enhance the connection of all three buildings that make up Penn Dental Medicine, facilitating interaction of faculty and staff as well as patients and visitors.