

INDIANA UNIVERSITY SCHOOL OF DENTISTRY | BULLETIN

ALUMNI

2017

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RESEARCH AT IU DENTISTRY

Translating new
knowledge to
advance oral health



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One hundred years ago, dental students, alumni and even the dental school dean were called to serve. Not everyone came home.

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Providing interdisciplinary, high-tech care in one setting.

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On the cover

Dr. Angeles Martínez Mier (Preventive Dentistry'95, PhD Dental Science'00) is one of IUSD's NIH-funded researchers on the quest to improve oral health worldwide.

Indiana University School of Dentistry Alumni Bulletin | Volume 27, Number 1, 2017

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Dr. Patricia Clark (DH'74, DDS'80, Endodontics'86), right, was jubilant after hooding her daughter-in-law Grace Clark.



IU Pediatric Dental Alumni Association Biennial Meeting »

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Immediate Past President Chad (DDS'99, Peds'01) and Megan Hazelrigg at the IU Pediatric Dental Alumni Association biennial meeting



from the **DEAN**

Dr. John N. Williams

Building a 21st century dental school

I've written a lot in this column about our new clinical building under construction. The James J. Fritts, DDS Clinical Center, on track to open in mid-2018, is the model of the dental education clinic for the 21st century. It will have state-of-the-art operatories, contemporary spaces and advanced diagnostic and treatment technology in a light-filled, modern steel and glass design that blends with the historic 1933 limestone façade along Michigan Street. We are eternally grateful to you, our alumni, whose support have made this great new facility possible.

But the new clinical building is, after all, a building. It does not make a dental school, nor will it alone take us where we need to be to offer a 21st century dental education. As a site visitor for the Commission on Dental Accreditation, I have evaluated numerous dental schools across the country. The most progressive schools have these qualities in common: evidence-based classroom curricula that drive the clinical curriculum, a robust research program, engaged faculty, faculty leadership on a national or international level, adaptation of new technologies, and a supportive, humanistic culture.

Since I joined IUSD almost seven years ago, we have been on a journey to transform the dental school into one of the best for the 21st century. We've made huge strides, but I challenge IUSD to go further.

The cover story of this issue is dedicated to IUSD's 21st century research advancements. We are strengthening our efforts to build our research capacity for the future. Our funded researchers are generating the discovery science that will enable future dental practitioners to deploy new strategies to advance the prevention, diagnosis and treatment of oral disease.

Our curriculum is evolving to be current with digital technology. The digital world is where our incoming students live. We can't teach 1980s dentistry in 2017. We will continue

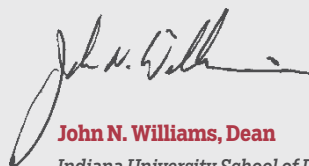
to invest in digital tools. IUSD's new Center for Implant, Aesthetic and Innovative Dentistry, featured in this issue, is a prototype of dentistry for the 21st century, which is interdisciplinary, digital and personalized.

One of the most welcome evolutions in curriculum from my standpoint is interprofessional education, which integrates the health care professions – medicine, nursing, social work, physical medicine and rehabilitation – as we treat the whole person, with good oral health as one component of good comprehensive health. When we communicate and move out of our discipline silos, we break down barriers to the systemic well-being of our patients.

Faculty recruitment and retention is critical for a thriving dental school. As several of IUSD's leaders prepare to retire – the imitable Dr. Karen Yoder featured in this issue among them – I am pleased with our emerging faculty leaders, who are becoming known as leaders in their fields nationally and internationally. However, attracting bright stars requires that we have the infrastructure aligned to support them, including endowed chairs and professorships.

As I greeted our almost 200 total graduates as they crossed the podium at commencement on May 13, I was reminded that we are most fortunate to work in dental education. We take our job to prepare the next generation of oral health care providers very seriously. Our students bring our dental school to life. And when they leave IUSD, they will be equipped with an education that is more interdisciplinary, digital and personalized for 21st century oral health care.

With deep appreciation,



John N. Williams, Dean
Indiana University School of Dentistry

Congratulations CLASS OF 2017



They did it!

After years of diligence and dedication, the 196 members of the class of 2017 received their DDS, Dental Hygiene, Dental Hygiene Public Health, Dental Assisting and post-doctoral dental specialty degrees on May 13, 2017, at the Indiana Convention Center.

"Commencement is the most important event for Indiana University School of Dentistry," said Dean John Williams. "This occasion marks the crowning achievement of the students assembled here, and more significantly, it marks their new beginning as members of the oral health care profession."

The DDS class of 2017 is made up of 58 women and 51 men. Indiana residents number 73, with 20 graduates from out of the state and 16 from outside the United States. The allied health programs graduated 22 dental hygienists and 19 dental assistants.

IUPUI Executive Vice Chancellor Kathy Johnson greeted graduates and their families. Dr. Karen Yoder, director of Community Engagement and Health Policy, delivered an inspired keynote address. A tireless advocate for the underserved, Dr. Yoder retires after more than 50 years at IUSD. In her speech, she encouraged graduates to thank their mentors and mentor others, take mindful risks and be kind. (A feature about Dr. Yoder begins on page 22.)

The awards ceremony and the IUPUI Commencement were held on May 14, 2017, at Lucas Oil Stadium.



BEST WISHES CLASS OF 2017, AND WELCOME TO YOUR ESTEEMED PROFESSION!

A COMPLETE LIST OF 2017 GRADUATES AND AWARD RECIPIENTS IS AVAILABLE AT DENTISTRY.IN.EDU.

A GALLERY OF COMMENCEMENT PHOTOS CAN BE FOUND AT FACEBOOK.COM/IUDENTISTRY.

1. At the IUPUI Commencement are front row, Elisa Salazar, Jackie Wiles, Jessica Cole (class secretary/vice president, communications), Debbie Bademosi, Jacob Balkos (class president), Jack Swartout (class webmaster), Samuel Titus. Back row, Jeffrey Valliere and Scott Davis.
2. Among Indiana University's newest dental assistant graduates are Shelby Stanley, Alexes Strickland, Jaewon Suh, Ameer Tomes, Liliana Viggers and Lindsay Wittell.
3. DDS graduate Samuel Titus received numerous honors, including the Maynard K. Hine Award from Dr. Renee Shirer, president of the IU School of Dentistry Alumni Association.
4. Student Outreach Clinic Chair Benjamin Fischer presented a bouquet of flowers to keynote speaker Dr. Karen Yoder after her inspiring speech.
5. Proud grandfather Ralph Merkel (DDS'58) and DDS graduate Jeffrey Valliere
6. Dental Hygiene graduate Bonica Carr



7. Faculty members Captain (Ret.) Kim Diefenderfer and Colonel (Ret.) James Oldham commissioned husband and wife DDS graduates John and Erin Seely into the U.S. Army and U.S. Navy respectively.

8. Dental Hygiene graduate Kelly Hand

9. Steven Keglar and George Jusu moments before they became dentists

10. Anna Marr will join her father Daniel Schmidt (DDS'75) in practice in Auburn, Ind.

11. Members of the third cohort of the International Dentist Program are, back row from left, Yasir Al-Obaidi, Anupriya Fernandes, Osama Naga, Anusha Kotha, Ujjwal Dhankhar, Margi Bhavsar, Mohamed Aboelsaad and Pranali Patel. In front, Ronia Aasar.

12. Dental school was the beginning of a lifetime friendship for Marli Leist, Emily Murray, Megan Wesner and Loren Nelson (class vice president).

13. Brother Mitchell (DDS'14) and father Stephen (DDS'68, OMFS'73) hooded Alexandra Troyer.

NEWS BRIEFS

FRITTS CENTER SPRINGS FORWARD

Work on the James J. Fritts, DDS Clinical Center continues to move at a steady clip. During the mild winter and spring, construction crews wrapped the exterior with insulated sheathing, framed the interior walls, and poured a concrete slab on the utility penthouse. They soon will break into the east façade of the current building to create space for the walkways, which will connect to the front lobby, the third floor, and where the Endodontics Administrative office is located, specifically the office of Dr. Ned Warner, who has been known to hand

snacks out his window to construction workers. The Endodontics Department will move to the Fritts Clinical Center when complete.

The contemporary, 45,000-square-foot clinical building addition will provide 125 new operatories. The building is named for **Dr. James Fritts**, a 1965 graduate of the dental school from Rochester, Ind. Dr. Fritts and his family made a generous donation toward the new building. Alumni support has made the new building possible. Live construction updates at dentistry.iu.edu.



"IU School of Dentistry's new clinical facility will be a robust addition to our urban health sciences campus and will contribute in countless ways to Hoosier health."

— **Nasser H. Paydar**
IUPUI Chancellor



Indiana MOM: 2 days, 2,000 patients, 1,000 volunteers

IUSD alumni, faculty, staff and students rolled up their sleeves and volunteered at the Indiana Mission of Mercy (MOM) dental clinic, which provided free oral health care to more than 2,000 underserved patients on May 12-13, 2017, at the Indiana State Fairgrounds. Indiana MOM is a charitable outreach program of the Indiana Dental Association's Foundation for Dental Health. Pictured here are 2016 DDS alumnae **Cher Cheng**, **Katie Boehm** and **Kathryn DelaCruz Wright**.

IU Day crowd funding supports Global Service Learning trips



Friends of IUSD supported Global Service Learning trips and showed their IU pride on the second annual IU Day on April 19 — a 24-hour, binge-watching, social-sharing, gift-giving, IU-wearing, online celebration of all things Indiana University. On IU Day, we raised \$2,225 toward Global Service Learning student scholarships. Third-year student **Elizabeth Taina** joined **Dr. Timothy Carlson** in Ecuador over spring break. A native of Peru, Taina speaks the language of the Kichwa community in Ecuador. "I thank God for this opportunity to work with the Kichwa community," Taina said. "I am so blessed to use my hands in the service to others."

IUSD celebrates 25th annual Research Day

For the 25th year, IUSD demonstrated innovation and ingenuity in oral health science at the annual Research Day, held April 10, 2017, at the IUPUI Campus Center. Almost 80 students and their faculty mentors presented their original research under the mentorship of IUSD faculty (see feature story about IUSD research advancements beginning on page 10).

Scientist, innovator and IUSD faculty emeritus **Dr. George Stookey**, who began Research Day 25 years ago, delivered the keynote address. Dr. Stookey is recognized worldwide as a legend in the field of preventive dentistry and cariology. He was on the ground floor in the research lab that invented the stannous fluoride formula used by Crest® and was director of IUSD's Oral Health Research Institute when it earned its reputation as a global innovator and leader in preventive dentistry research and oral health care product testing.



At the American Dental Education Association annual meeting in March, Dr. Stookey (left) received the William J. Gies Award for Innovation as a Dental Educator.

Ft. Wayne health sciences programs will move to IU



The IU School of Dentistry will assume administrative management of the dental hygiene, dental assisting and dental laboratory technology programs offered at the Ft. Wayne campus following recommendations made by the Legislative Services Agency and approval by the trustees of both Indiana University and Purdue University to realign IPFW to better serve northeastern Indiana.

Purdue will continue to serve as the managing campus and will offer all academic, research and public service mission areas and degrees, except for those designated as IU academic missions: dentistry, nursing, medical imaging, medicine and social work. IU will offer all health science degrees, including those currently offered by Purdue.

The Indiana University Board of Trustees approved the name of Indiana University Fort Wayne for its health sciences programs to reflect the realignment of Indiana University-Purdue University Fort Wayne, which will become effective July 1, 2018.

The Purdue University Board of Trustees also approved a resolution to designate Purdue University Fort Wayne as the new name for its campus.



Dr. George Zundo awarded Hine Medal

Dr. George Zundo (DDS'80), a tireless IUSD alumni volunteer, received the Maynard K. Hine Award on Feb. 23, 2017. The award is named for the former dean of IUSD and the first chancellor of IUPUI. Dr. Zundo has been an active supporter of IU Bloomington, IUPUI, the IU School of Dentistry and its alumni association. Dr. Zundo often is the first person to volunteer for a committee, an event or a student activity for the School of Dentistry. For the past 12 years, he has led IUSD's annual School of Dentistry alumni cruise. Thank you for your service, Dr. Zundo.



IUSD leaders emerge again at ADEA

For the second year in a row, an IUSD dental student has been elected chair of the Council of Students, Residents and Fellows (COSRF) of the American Dental Education Association (ADEA). **Allison Williams** (D3), second from right, received the chair baton from **Dr. Tim Treat** (DDS'16), who continues on the ADEA Board of Directors. **Natalie Lorenzano** (D2), right, was elected as the ADEA COSRF District 7 Commissioner and **Aly Ricker** (D2), left, was appointed as the COSRF representative on the ADEA Annual Session Planning Committee.



IUSD AMONG ELITE 50

Five IUSD students were named to the IUPUI Elite 50 for their achievements outside the classroom. They were chosen among IUPUI's 8,100 graduate and professional students. From left, **Dr. Travis Bellicchi** (Prosthodontics) and D4s **Brittanie Izsak**, **Jacob Balkos**, **Kathryn Dusman**, and **Kendall Frazier**.

CHANCELLOR'S AWARDS RECOGNIZE TOP ACHIEVERS



Dr. Afnan Al-Zain



Nicole Cleveland

Dr. Afnan Al-Zain, who completed her PhD this year in dental science, received the prestigious Sherry Queener Graduate Student Excellence Award at the Chancellor's Academic Honors Convocation on April 21, 2017. She is pictured here with IUPUI Chancellor Paydar and Dr. Sherry Queener, longtime IUPUI professor of pharmacology and the associate dean and director emeritus of the Indiana University Graduate School. Also at the convocation, **Nicole Cleveland**, DH2, was named a Chancellor's Scholar for achieving the highest GPA of all IUSD students.



Mark Vaughn and Pranali Patel, leaders in the Dental Student Research Group

RESEARCH ADVANCES ORAL HEALTH CARE

BY JILL JANSEN

As a practicing oral surgeon in India 15 years ago, **Thankam Paul Thyvalikakath, DMD, MDS, PhD**, envisioned the potential of a field that didn't yet exist. Today, as a pioneer in dental informatics at the IU School of Dentistry, Dr. Thyvalikakath, associate professor and director of the school's Dental Informatics Core, is the worldwide expert in using electronic dental records to identify ways to improve patient care.

"As an oral surgeon, I realized if I had all of the information at hand, I could come up with a better treatment plan that would reduce operating time, shorten patients' recovery and accelerate rehabilitation," Dr. Thyvalikakath explained.

Dentists, especially those educated and trained at the Indiana University School of Dentistry, are highly proficient in providing patient care. And while ongoing excellence in treating oral health problems is imperative, the profession's future also relies on fresh, innovative research discoveries to move dentistry and dental therapies forward.

Since the 1930s, when the U.S. Public Health Service designated IU as a research center for the study of pediatric dental diseases and IUSD opened its first research laboratory,

our school has engaged in robust research that has yielded significant results – many "firsts" and important findings that are still relevant today: the first bitewing X-ray, fluoride toothpaste, and antiplaque chewing gum for soldiers in the field, to name a few.

"With our rich research portfolio in cariology and public health and the new fields of regenerative medicine and dental informatics, IUSD's research program continues to make great developments in translational research," said **Tien-Min Gabriel Chu, DDS, PhD**, associate dean of research, IUSD, and professor, Department of Biomedical and Applied Sciences. "We've recruited some of the foremost researchers in their fields, and with generous NIH and industry funding, we are leading groundbreaking studies that can catalyze improvements in oral health globally."

Aligned with the research priorities of the National Institute of Dental and Craniofacial Research (NIDCR) of the National Institutes of Health, IUSD has invested in four main research focus areas: **Cariology, Bone and Tissue Engineering, Community Dentistry and Dental Informatics.**

CARIOLOGY

Cariogenic potential of biofilms

Look at a tube of Crest®, and you'll not only see the everyday remedy for fighting tooth decay, but the origins of IU School of Dentistry's proud history in cariology research. Since the stannous fluoride discovery of school alumnus Dr. Joseph Muhler and his partner Dr. Harry Day led to the introduction of the iconic toothpaste in 1955, IUSD's interest and strength in the study of dental caries have flourished, more recently with the research of **Domenick Zero, DDS, MS**.

An expert in clinical studies with *in situ* caries models, Dr. Zero, professor, Department of Cariology, Operative Dentistry and Dental Public Health, and director of IUSD's Oral Health Research Institute, has worked extensively on methods to improve and optimize fluorides and other preventive treatments. He was the primary investigator for a Phase I study with the U.S. Army's Office of the Surgeon General to test the safety of a pharmaceutical-grade anti-plaque chewing gum designed for combat soldiers in the field.

"Although trained as a restorative dentist, over time I became more interested in prevention and how to relieve people of the burden of diseases like dental caries, which can be painful, debilitating and costly," said Dr. Zero, who as a principal investigator has received numerous research grants from the National Institutes of Health and private industry.

Moving into an area of preventive dentistry that studies the cariogenic potential of biofilms, Dr. Zero is leading collaborative studies with Johnson & Johnson to model the growth of biofilms formed when bacteria adheres to the tooth surface. Biofilms are grown on the surfaces of specimens of tooth enamel prepared from extracted teeth that are placed in partial denture appliances using a highly standardized modeling method. The biofilms can be studied outside the mouth to determine their structure and types of bacteria present, as well as their metabolic capabilities.



Domenick Zero, DDS, MS, professor, Department of Cariology, Operative Dentistry and Dental Public Health, and director of IUSD's Oral Health Research Institute

"Through this innovative model, we study not only the basic science of the environmental conditions that affect biofilm growth, but also gather data on the extent of enamel demineralization and the potential to cause tooth decay," Dr. Zero explained. "The goal of the research is to identify biomarkers indicating the point at which the biofilm becomes pathogenic with the potential to cause decay. Another goal is to study biologic agents capable of modifying the biofilm so it's healthier and less disease promoting."

In addition to studying the early detection and treatment of dental caries, Dr. Zero is targeting the main underlying cause of tooth decay – sugar.

"As dentists, we've always known that excessive sugar consumption is tied to dental caries, but now that the danger of sugar as a driver for diabetes, obesity and other diseases has finally reached the mainstream, we have an opportunity as a profession to align ourselves with other medical and public health professionals and work together on innovative ways to improve health by controlling a main cause of disease – sugar," Dr. Zero concluded.

BONE AND TISSUE ENGINEERING

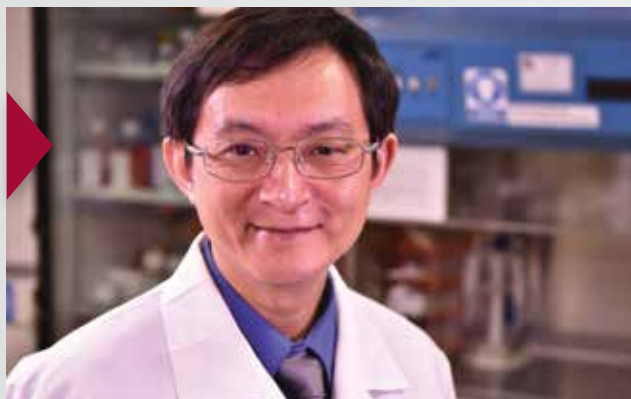
Novel regenerative therapies offer new treatment options

Regenerative medicine, a promising field of translational research, offers methods for regenerating or replacing tissue that is lost, unable to heal or permanently damaged. Clinician scientists around the globe are engaged in this multi-disciplinary research with life-changing implications for patients. Three IU School of Dentistry researchers are at the forefront of regenerative research in the areas of bone and tissue engineering to address diseases such as cranial and maxillofacial defects, periodontitis and osteoporosis.

Regenerative "scaffold" is possible alternative to complex cranioplasty

Tien-Min Gabriel Chu, DDS, PhD, associate dean for research and professor, Department of Biomedical and Applied Sciences, has been involved in bone regeneration for more than a decade. During his career, he has explored long bone and mandible regeneration, and is now focusing on bone regeneration to repair congenital cranial defects or defects caused by severe head trauma, infection or bone cancer.

Dr. Chu's research involves implanting a biodegradable "scaffold," a hydrogel made primarily from water and polymer, into the cranial defect for six to 14 weeks. The scaffold, also containing stem cells and chemical cues that attract and bind tissue cells, encourages tissue formation and bone regrowth before the scaffold degrades and disappears. The therapy is a potential alternative to cranioplasty, the



Tien-Min Gabriel Chu, DDS, PhD, associate dean for research, and professor, Department of Biomedical and Applied Sciences

current gold standard for repairing cranial defects, and to regenerate maxillofacial bones. Requiring bone grafts and/or the placement of synthetic material to repair or reshape the bone, cranioplasty has a number of drawbacks, including donor site morbidity and possible infection at the bone graft site, cosmetic limitations and the potential for metal and other materials to wear or break, resulting in more complex surgery.

“The beauty of our research is that we use engineered cells and protein to help regrow the bone without leaving behind a piece of metal or synthetic material or without harvesting a bone graft from another part of the body,” Dr. Chu explained. “The results we’ve seen so far are very encouraging; we see tissue starting to form, and as the gel degrades and disappears, bone grows and covers the defect.”

In collaboration with Dr. Melissa Kacena in the Department of Orthopaedic Surgery at the IU School of Medicine, Dr. Chu also is participating in research funded by NASA to provide biodegradable scaffolds in the study of thrombopoietin, a promising drug used for fracture healing in zero gravity conditions, which simulate patients on bed rest after orthopedic trauma.

Innovative biomaterials fight oral diseases and regenerate lost dental tissues

More than half of adults suffer from periodontitis, an aggressive chronic inflammatory oral disease that can result in pain and tooth loss when the tissues and bones supporting the teeth break down.

Marco Bottino, DDS, MSc, PhD, associate professor in the Department of Biomedical and Applied Sciences and director of Applied Biomaterials and Regenerative Dentistry, is developing biomaterials to fight periodontal infection and promote the regeneration of the affected structures using novel biomaterials.

“Our challenge is preserving the existing teeth by managing the infection and driving the formation of new tissues to secure the tooth in place,” he said.

Through a nanotechnology called electrospinning, Dr. Bottino transforms a polymer solution into nanoscale fibers that are modified with infection-fighting agents to combat the periodontal bacteria, as well as biological molecules that encourage regeneration of bone and soft tissue. “This novel biomaterial allows the regenerative process to take place,” said Dr. Bottino, who hopes to begin clinical trials on the therapy in the next three to five years with dental tissue regeneration research funded by NIDCR.

Dr. Bottino’s NIDCR research also has targeted root canal disinfection and regeneration of the dental pulp. In the United States, more than 15 million patients undergo root canal treatment each year because of dental caries and other conditions that affect the integrity of the pulp. In young children, pulp tissue death arrests tooth root development, increasing the risk of tooth fracture. Until now, no clinical therapy existed to promote both root canal disinfection and dental pulp regeneration.

Dr. Bottino’s lab recently identified a cell-friendly strategy using antibiotic nanofibers as three-dimensional drug delivery constructs to promote root canal disinfection with minimal toxicity to resident stem cells and an injectable biomaterial that can predictably lead to new pulp formation.



Marco Bottino, DDS, MSc, PhD, associate professor, Department of Biomedical and Applied Sciences and director of Applied Biomaterials and Regenerative Dentistry

“Being a researcher is one of the rare career opportunities in which you ask and answer questions that interest you.”

— Angela Bruzzaniti, PhD

Understanding bone cell mechanisms key to treating major diseases

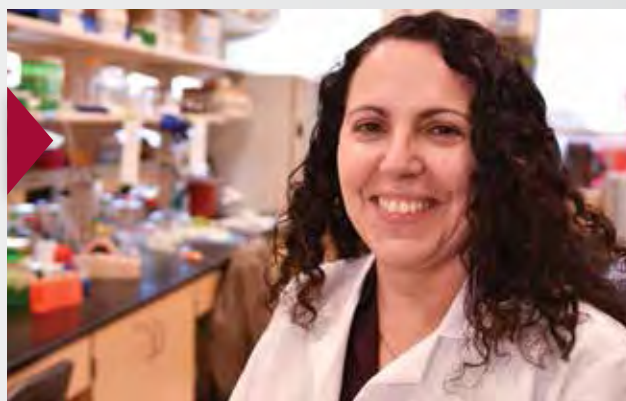
Through basic science research of major cell types, **Angela Bruzzaniti, PhD**, associate professor, Department of Biomedical and Applied Sciences, is examining the mechanisms of bone loss and bone regeneration – studies that have significant clinical applications for patients suffering from osteoporosis, periodontitis and other bone-loss diseases.

“This project is interesting because it has the potential to impact so many clinical areas,” said Dr. Bruzzaniti, who began studying bone formation while earning her PhD at the University of Melbourne in Australia. “It’s not only rewarding to understand the mechanisms that control these cells, but there’s the ability to treat disease, which is I think the ultimate goal of research.”

Dr. Bruzzaniti’s NIH-funded research focuses on the actions of the three major types of bone cells – osteoclasts (bone-degrading cells), osteoblasts (cells that make bone) and osteocytes, specialized cells within the bone that coordinate the activity of the other two.

“By understanding the cells’ actions, we can manipulate them by targeting proteins that control their shape, morphology or ability to make bone or degrade bone,” Dr. Bruzzaniti explained. “If we can separate the actions of the individual bone cells, we can make new bone or degrade existing bone depending on the clinical circumstances.”

The research is particularly relevant to localized bone loss in the oral cavity caused by periodontitis. In addition to what can be learned about regenerating bone lost to disease, low bone mass in the jaw prevents the placement of dental



Angela Bruzzaniti, PhD, associate professor, Department of Biomedical and Applied Sciences, and faculty advisor to the IUSD student chapter of the American Association of Dental Research

implants, inhibiting restoration. Dr. Bruzzaniti’s studies are also applicable to efforts to move teeth or expand the palate to place orthodontic appliances.

Dr. Bruzzaniti serves as faculty advisor for the IUSD student chapter of the American Association of Dental Research, mentoring and encouraging budding oral health researchers. “Being a researcher is one of the rare career opportunities in which you ask and answer questions that interest you,” said Dr. Bruzzaniti. “Arriving at an answer that you can share with the community and world – that’s helpful in curing or treating disease – is valuable and very rewarding.”

COMMUNITY DENTISTRY

Designing oral health interventions to meet population needs

Improving the oral health of people in Indiana and around the world has been IUSD’s mission for almost 140 years. Indeed, community-based research helps public health professionals develop targeted programs and interventions to ensure specific communities, especially those at risk, receive the care and support they need to improve their oral health.

Professors **Angeles Martínez Mier, DDS, MSD, PhD**, and **Gerardo Maupomé, BDS, MSc, DDPH, RCS(E), PhD**, in the Department of Cariology, Operative Dentistry and Dental Public Health, are leading innovative research to gather new knowledge and insights to expand the reach of preventive dentistry.

Research in Mexico fuels knowledge, improves oral health

Dr. Martínez Mier, chair of the Department of Cariology, Operative Dentistry and Dental Public Health, is an internationally recognized expert in fluoride. Leader of the NIH-funded team charged with developing global gold standard methods to measure fluoride, she is conducting two major research projects with populations in Mexico – one tied specifically to fluoride and the other focused on community-based preventive dentistry.

Dr. Martínez Mier is a primary investigator of a five-year study funded by the National Institute of Environmental Health Sciences that is using these gold standard methods to examine fluoride intake and toxicity in a cohort of approximately 2,000 children followed over two decades as part of the Early Life Exposures in Mexico to Environmental Toxicants project. Data from the three birth cohorts, drawn from Mexico City maternity hospitals beginning in 1994, are demonstrating if and how exposure to various metals and chemicals, including fluoride, affects pregnant women and



Cariology researchers at work: Drs. Azza Ahmed, a pediatric dentist and preventive dentistry PhD candidate; Angeles Martínez Mier, chair of Cariology, Operative Dentistry and Dental Public Health; and periodontist/researcher Ana Gossweiler

children. The team, which includes IUSD, the University of Toronto, the University of Michigan and the National Institute of Public Health in Mexico, is analyzing the concentrations of these metals and chemicals in specific long-term biomarkers, such as urine, plasma and toenails, and associating them to IQ, occurrences of ADHD and possible implications on body mass index (BMI) and growth.

“We know that fluoride is safe and effective at an appropriate dose,” said Dr. Martínez Mier, who began preventive dentistry research at IUSD two decades ago under the mentorship of Dr. George Stookey, an international luminary in preventive dentistry research. “Although it has beneficial effects, fluoride is a unique element in that it also can have detrimental effects if exposure is too great.”

Dr. Martínez Mier is also leading a team of Mexican and American researchers from IUSD and the University of Yucatan working on a direct community oral health prevention program that grew out of IUSD’s global service-learning partnership with a Mayan community in Yucatan, Mexico.

“We started taking dental students to Yucatan about 10 years ago; over time, we built a level of trust with the Mayan community that allowed us to engage in research that assesses their dental knowledge to determine long-term interventions to improve their oral health,” she explained. Delivered by health promoters within the Mayan community, preventive measures will involve fluoride and most likely sealants.

“We’re finally moving from studies to interventions, and we’re very excited about it,” she said.

Network science drives more effective delivery of oral health messages

Applying network science methods, Dr. Gerardo Maupomé is mapping multilayered social networks in underserved communities in the Midwest to find people of influence and determine how they can be used to alter or promote norms and perceptions about oral health.

“Over the past several years, it’s become more apparent that studying dental problems in isolation, without accounting for the fact that individuals live in groups, is not taking us where we need to be to improve oral health,” said Dr. Maupomé, one of a few researchers in the United States using network science in dental research. “When we map community networks to ascertain the relationships among community members, we may uncover resources to support healthful choices. One such approach would be to identify the leaders of opinion, which in turn may lead to designing and implementing interventions. For example, by altering the perceptions and information about health and disease of the people of influence, they can become mechanisms of change within the community at large.”

Dr. Maupomé is the principal investigator of a five-year study funded by NIDCR to map the social network contact points that impact whether or not people seek or receive dental care. His work is benefiting from a collaboration with the Indiana University Network Science Institute, an international leader in social networks research. Other partners include the IU Bloomington Department of Sociology and the IUPUI Fairbanks School of Public Health.



Gerardo Maupomé, BDS, MSc, DDPH, RCS(E), PhD,
*professor, Department of Cariology,
Operative Dentistry and Dental Public Health*

Another network methods study that Dr. Maupomé is closely involved with is a collaboration with colleagues at Boston University. Also funded by NIDCR, this research is testing methods to disseminate health-related information to help low-income mothers choose healthful beverages for their toddlers. By mapping the mothers’ personal networks, the research aims to identify how health information propagates in a community.

“This research tool from the complex science methods enables us to be more thoughtful in how oral health interventions are created, how they become programs and how the programs are tested so they eventually become proven systems that actually promote oral health,” Dr. Maupomé said.

“We need both practicing dentists and dental students who are willing to cross the boundary from clinical dentistry to basic science – dentists willing to apply their clinical knowledge to research advancements for the next generation.”

— Tien-Min Gabriel Chu, DDS, PhD

DENTAL INFORMATICS

The power of informatics to improve dental care

As principal investigator of a three-year study funded by the National Dental Practice-Based Research Network, **Thankam Paul Thyvalikakath, DMD, MDS, PhD**, is leading a project to collect and analyze patient electronic dental records data from dental practices across the United States. The research is designed to determine the feasibility to assess treatment outcomes for posterior composite restorations and root canal procedures, specifically the longevity of both root canal-treated teeth and posterior teeth restored with composite material.

“Through informatics, which is the science of information, we are creating a learning health care system that analyzes data captured during patient care to show us where we are succeeding in clinical dentistry and where we can improve.”

The IU School of Dentistry, one of the few dental schools in the United States currently engaged in dental informatics research, is coordinating the study with the Regenstrief Institute, known internationally for its work in developing electronic health records. Directing the activity of six regional sites, Dr. Thyvalikakath and team designed the protocol for the study, which has recruited more than 90 dental practices in the first six months.

With the first results expected to be published by late 2018, the research, Dr. Thyvalikakath explained, will provide clinicians with vital information about how they are performing their procedures and insight and evidence for future clinical decision-making for both root canal treatment and restoring posterior teeth.

“Informatics is translational in taking the best evidence and enabling it to be applied at the point of care to improve both patient outcomes and assist clinicians in making better, patient-centric decisions,” Dr. Thyvalikakath said.

In addition, the use of informatics-based research in support of personalized care and clinical decision-making is especially helpful for younger, less-experienced clinicians.

“Senior clinicians are more likely to offer treatment options based on their personal experience and what has worked with their other patients,” Dr. Thyvalikakath



Thankam Paul Thyvalikakath, DMD, MDS, PhD, *associate professor, Department of Cariology, Operative Dentistry and Dental Public Health*

explained. “For new dentists, informatics expands the base of available knowledge, equipping them to personalize care by tailoring data results to the needs of individual patients.”

Compared to only 20 years ago, researchers and clinicians now have access to a phenomenal amount of data, Dr. Thyvalikakath said. “The challenge is turning what we have into meaningful information to improve what we want to address, whether it’s clinician work processes, administrative needs to improve efficiency, or even patient outcomes,” she said. “We aren’t there yet, but that’s the future and the power that informatics brings.”

As for the future, each of IUSD’s esteemed researchers encourages future oral health care providers, especially the more than 500 students studying at IUSD, to incorporate research into their professional lives.

“We need both practicing dentists and dental students who are willing to cross the boundary from clinical dentistry to basic science – dentists willing to apply their clinical knowledge to research advancements for the next generation,” said Dr. Chu, associate dean for research.

AN ARMY OF DENTISTS IN THE GREAT WAR

by Sean Stone, Dentistry Librarian



An early panorama photo of the Indiana Dental College Students' Army Training Corps



Early April 2017 marked the centennial of the United States' involvement in World War I. It's an understatement to say that the war had a profound impact on the military and our country; however, it also had a significant impact on dentistry and dental education.

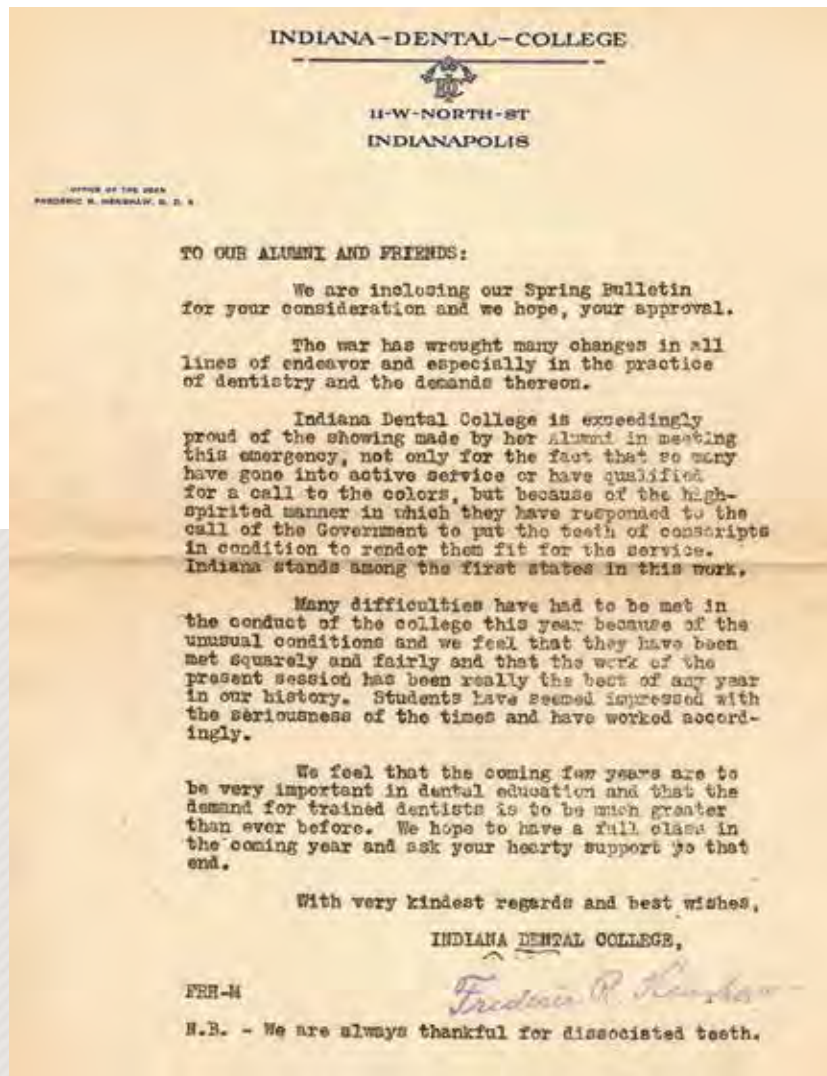
By early 1918, 69 alumni of the Indiana Dental College (IDC), which preceded the Indiana University School of Dentistry, were in active service during World War I in the U.S. Army Dental Reserve Corps. Another 104 were under commission as First Lieutenant awaiting the call to colors. Even Dean Frederick Henshaw took a leave of absence to serve. At least one of IDC's faculty members died in service.

Video from the Dr. Samuel D. Harris National Museum of Dentistry highlights U.S. dentistry in WWI. More history, as well as some truly amazing photos, is available at the U.S. Army Dental Corps website.

Special thanks to Michael Delporte, Library Assistant, for his archival research.



Dean Henshaw took a leave of absence to serve in WWI.



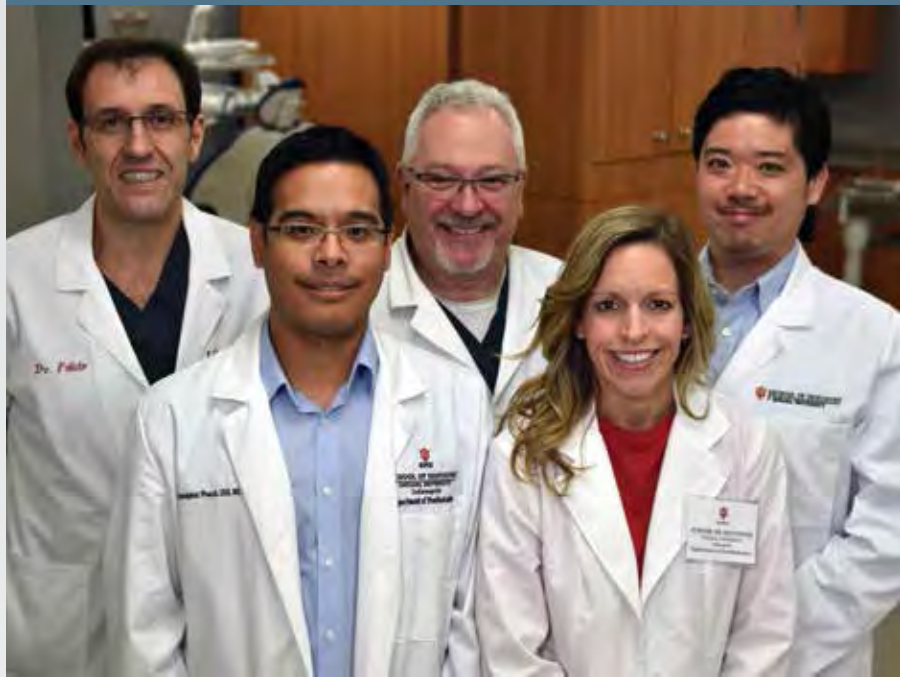
Letter from Dean Frederic R. Henshaw included with the Spring Academic Bulletin c.1917

1917 » In a very short period of time, U.S. armed forces went from fewer than 200,000 soldiers to almost 3 million conscripts, and they all required dental care.



Indiana Dental College alumni who gave their lives in the service of their country in WWI.

New Center for Implant, Aesthetic and Innovative Dentistry to provide interdisciplinary high-tech care in one setting



Center Co-Directors, back row, Drs. Waldemar Daut Polido, Oral and Maxillofacial Surgery; Dean Morton, (Director), Prosthodontics; Yusuke Hamada, Periodontics. Front row, Drs. Kamalphob Phasuk, Prosthodontics, and Michele Kirkup, Comprehensive Care and Innovation.

Coming later this summer to IUSD is the new Center for Implant, Aesthetic and Innovative Dentistry (CIAID), a comprehensive, interdisciplinary clinic for patients with advanced implant and aesthetic needs.

“The Center for Implant, Aesthetic and Innovative Dentistry is a state-of-the-art clinical and didactic facility,” said Dr. John Williams, dean of the IU School of Dentistry. “The center will bring together a team of oral health leaders from the fields of prosthodontics, periodontics, oral and maxillofacial surgery, general dentistry and research, and will be supported by the latest advanced technology.”

CIAID will be housed within the dental school and is expected to open late summer.

Dr. Dean Morton, CIAID director and Prosthodontics Department chair, said the center will streamline education and patient management within the pre-doctoral comprehensive care and graduate specialty programs.

“We are focused on improving the breadth and quality of care for our traditional patient pool,” said Dr. Morton. “Expanding our ability to provide students and their patients with contemporary implant and aesthetic treatment options, while utilizing the most modern equipment, will position our programs well now and in the future.

“Patients will receive first-class, evidence-based, individually focused and vertically integrated care in one location, with access to leading-edge diagnostic and treatment technology.”

Pre-doctoral and post-doctoral dental students will be the primary care providers within the center. Specialists across disciplines will mentor students in an interactive teaching environment, Dr. Morton said. He added that this vertical, interdisciplinary model, pioneered in medicine, is a care delivery system in which the complete spectrum of treatment is provided in one setting.

In addition to contemporary, integrated care and teaching, the center faculty will conduct research and provide continuing education training for dentists.

Dr. Morton’s IU School of Dentistry colleagues will serve as CIAID co-directors, including:

- Dr. Yusuke Hamada, Periodontics
- Dr. Michele Kirkup, Comprehensive Care and Innovation
- Dr. Kamalphob Phasuk, Prosthodontics
- Dr. Waldemar Daut Polido, Oral and Maxillofacial Surgery

“The Center for Implant, Aesthetic and Innovative Dentistry allows the dental school to diversify both the quality and type of services our patients receive,” Dean Williams said. “This interdisciplinary, high-level educational approach, as well as our new contemporary 45,000-square-foot clinical building, is the model of the dental school for the 21st century.”

ALUMNI EVENTS

152nd Midwinter Meeting

Feb. 24, 2017, Chicago, IL »



1. James Lipton (DDS'82) and Mary Roser

2. Back row from left, Millie Chang (DDS'01), Yen Wagner (DDS'02) and Trang Mai (DDS'02). Front row, Juan Chang and Paul McLeod.

3. Tami Austin (DH'97)

4. Assistant Dean of Development John Hoffman and wife Lisa, Lana and James (DDS'65) Fritts, and Lucy and John Williams, Dean

5. Joan and Robert Eversole (DDS'88)

6. Father and daughter Sangyoung (DDS'91) and Samantha Lee, D1

7. Chicagoland endodontists Michael Mintz (DDS'86) and Joseph Baldassano (Endodontics'92)

8. Charles Keever (DDS'78), Thomas Kapczynski (DDS'78), Vance Lopp (DDS'65), Paul Keller (DDS'78), Joseph Dudding (DDS'79)

9. Pediatric Dentistry Professor Juan Yepes and his wife Angela

Alumni Reception at the American Association of Orthodontics Annual Session

April 22, 2017, San Diego, Calif. »



1. Greg Oppenhuizen (Ortho'84) and Serkis Isikbay (DDS'94, Ortho'07)
2. Wally McCarlie (PhD Dental Science'10, Ortho'12), Hekyong Kang (Ortho'14) and Kelton Stewart, Orthodontic Graduate Program director and Orthodontic Clinic director
3. Carter (DDS'11, Peds'13) and Emily (DDS'11, Ortho'14) McCrea
4. Billy Chai (Ortho'14) and resident Judy Yeh

Winter College

Naples, Florida February 10, 2017»

Snowbirds enjoyed Winter College

IUSD alumni flocked to Florida in February for the IU Alumni Association Winter College. Dean Williams and IUSD Library Director Sean Stone presented "IUSD at the Bicentennial – Building the Future of Dentistry." Later, Lloyd Hagedorn (DDS'66, Perio'68) and his wife Jan hosted a reception at their Naples home for IUSD friends attending Winter College. Pictured at the Hagedorn's are Charles Simons (DDS'68, Orthodontics'75), Dean Williams, Lloyd Hagedorn and David Avery (DDS'66, Peds'71).



IU Pediatric Dental Alumni Association Biennial Meeting

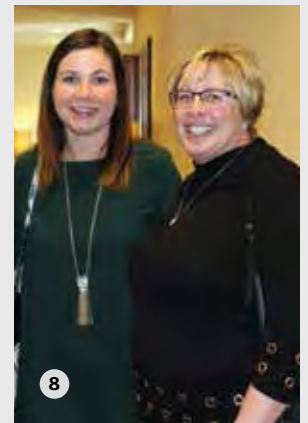
April 8, 2017, Indianapolis »



Phillip Pate (DDS'68, Peds'70), center, received the 2017 IU Pediatric Dental Alumni Association's Distinguished Alumnus Award.

Dr. Pate's service to his community, state and in underserved regions of the world spans more than four decades. He has taken medical/dental missions to Haiti and Israel and founded the Kairos Prison Ministry at the Indiana State Prison. He served for many years as a board member and officer for the IU Pediatric Dentistry Alumni Association and the IUSD Alumni Association.

"We are so lucky to have found dentistry as a profession, and it's important for us to find a way to give back to others," Dr. Pate said. "The rewards of service to others are incredible."



1. Phillip Pate (DDS'68, Peds'70), center, was joined at the alumni dinner by family members: daughter-in-law Kristen Pate (DDS'94), son Matt Pate (DDS'93, Peds'95), wife Ruth Ann, and granddaughters Gabriella and Erika. Pate practices in Kokomo, Ind., and has been a respected faculty member at Riley Hospital for Children for 47 years.
2. Chad Hazelrigg (DDS'99, Peds'01) passed the IUPDAA presidency baton to Vickie Hemann (Peds'97).
3. James Weddell (DDS'77, Peds'80), spouse Karen Fischer (DH'79, DDS'85) and Keith Ray (Peds'81)
4. 1970s classmates reunited: Seated, from left, Florence and Philip (DDS'72, Peds'74) Walter, Virginia (DDS'68, Peds'70) and Chalmer Crose. Standing, Robert (DDS'68, Peds'70) and Suzy Rimstidt, Phillip (DDS'68, Peds'70) and Ruth Ann Pate, and Cathy and Keith (DDS'62, Peds'72) Roberts.

5. Andrew (Peds'11) and Angela Williamson
6. Graduating pediatric residents Niekia Franklin (second from left) and Madison Galloway (chief resident) with their guests Raymund Rebong, Orthodontics resident, and Ryan Galloway
7. Bret (DDS'93, Peds'95) and Tracey Jerger with David Avery (DDS'66, Peds'71)
8. Graduating pediatrics resident Amanda Braun with her proud aunt, Carol Braun (DDS'84, Peds'86)

FACULTY NEWS



Marco Bottino



Simone Duarte



Sabrina Feitosa



Yusuke Hamada



Santiago Ocampo



Waldemar Daut Polido



Michelle Bissonette Priest



Elizabeth Ramos



Amul Singh



Kelton Stewart



Thankam Paul Thyvalikakath

Marco Bottino, associate professor and director of Applied Biomaterials and Regenerative Medicine, has been appointed program director of the Dental Materials graduate program.

Simone Duarte has joined Cariology, Operative Dentistry and Dental Public Health as associate professor. She is an NIH-funded researcher with a focus on biofilm. Dr. Duarte received her PhD and master's degrees in pharmacology from Brazil's Dental School of Piracicaba, State University of Campinas, Piracicaba, where she also completed her DDS.

Sabrina Feitosa has joined Biomedical and Applied Sciences as assistant research professor and Dental Biomaterials lab manager. Dr. Feitosa previously served as an international scholar under the mentorship of Dr. Marco Bottino.

Yusuke Hamada, clinical assistant professor, Periodontics and Allied Dental Programs, received the American Association of Periodontics 2017 Educator Award for Outstanding Teaching and Mentoring in Periodontics.

Santiago Ocampo has joined Periodontics and Allied Dental Programs as clinical assistant professor. Dr. Ocampo completed prosthodontics ('13) and periodontics ('16) residencies at IUSD.

Waldemar Daut Polido has joined the faculty as clinical professor and director of the Pre-doctoral Oral and Maxillofacial Surgery. He comes to IUSD from Porto Alegre, Brazil, where he served as program director for the Implant Dentistry Program at the Hospital Moinhos de Vento. Dr. Polido is also a co-director of IUSD's new interdisciplinary Center for Implant, Aesthetic and Innovative Dentistry, which will be launched later this year.

Michelle Bissonette Priest, clinical director, Dental Assisting, received the IUSD Alumni Association Distinguished Faculty Award for Teaching.

Elizabeth Ramos, clinical assistant professor, Periodontics and Allied Dental Programs, has been named director of Program and Institutional Assessment in the Office of Academic and Clinical Affairs. She will direct year

2020 accreditation activities. Dr. Ramos was recently elected to Omicron Kappa Upsilon National Dental Honor Society as a faculty member.

Amul Singh, clinical assistant professor, Comprehensive Care and General Dentistry, has been named IUSD's director of Clinical Quality Improvement. He will oversee, review and assess the dental school's clinical operations, including patient intake and screening, treatment planning and Mock Board processes. He also chairs IUSD's Quality Improvement Committee.

Kelton Stewart, associate professor of Orthodontics, program director of the Orthodontic Graduate Program and the Orthodontic Clinic director, is the first recipient of the Dr. James J. Baldwin Professorship of Orthodontics.

Thankam Paul Thyvalikakath, associate professor of Cariology, Operative Dentistry and Public Health and director of IUSD's Dental Informatics Core, received the IUSD Alumni Association Distinguished Faculty Award for Research.

Blanchard's Bees



There's been lots of buzz around bees in the news lately. "Colony collapse disorder" has been severely impacting beehives across North America, bringing into stinging focus the important role these busy little pollinators play in producing a myriad of popular crops. According to the *Journal of Apicultural Research*, between April 2014 and April 2015, beekeepers across the United States lost more than 40 percent of their honeybee colonies. Within the state of Indiana, winter beehive losses of 40-60 percent have been seen over the past several years.

IUSD's Dr. Steven Blanchard, associate professor and director of Graduate Periodontics, is a hobbyist beekeeper and has been leading a project to establish beehives on campus. "Part of the issue is loss of habitat, and a lot of monoculture farming," Dr. Blanchard said. "The number of commercial beekeepers has declined quite a bit...it's been too problematic."

But it's not all bad news. "There has been a tremendous growth in urban beekeeping in the past five to seven years," Dr. Blanchard said.

The IUPUI hive, located near the sporting fields south of the dental school, is among the renaissance in urban beekeeping. "The main goal was really just to get bees onto campus," explained Dr. Blanchard. "We want to use this as an educational tool."

The IUPUI Office of Sustainability is working with Dr. Blanchard to achieve a Bee USA Campus designation to support North American pollinators.

For more information, contact Dr. Blanchard at stblanch@iu.edu.

— Terry Wilson

Trustees' Teaching Awards



Paul Edwards



Richard Gregory



Daniel Shin



Lisa Willis

The Trustees' Teaching Award honors faculty members for their exceptional teaching and impact on students. This year's recipients are **Paul Edwards**, professor, Oral Pathology, Medicine, and Radiology; **Richard Gregory**, professor, Biomedical and Applied Sciences; **Daniel Shin**, clinical assistant professor, Periodontics and Allied Dental Programs, and **Lisa Willis**, clinical assistant professor, Cariology, Operative Dentistry and Dental Public Health.

First father-daughter combo inducted into International College of Dentists



The first father-daughter duo was inducted into the International College of Dentists at the American Dental Association meeting in November in Denver. Pediatrics graduate faculty **LaQuia Vinson** was inducted with her father **Wayne Walker** of Fort Wayne. "There have been father-son inductees, but we are the first father-daughter combo," Dr. Vinson said. IUSD alumni **Caroline Derrow** (DDS'04) and **Sarah Herd** (DDS'04, Periodontics'07) also were inducted.

IUSD's public health pioneer, DR. KAREN YODER, retires after 50 years of serving vulnerable populations

by Dr. Timothy Carlson (DDS'78, Operative Dentistry'86)



The Yoder family lived and worked in Tanzania, East Africa, for five years in the 1970s. Karen is standing in the passenger doorway with Keith below her. Their four children are on top of the jeep, from far left, David (on his knees), Ben, Jon, and Sara, the toddler with her head tilted. They are pictured with Keith's parents, brother and his family during a visit.

"Rats. Who's that darned operative dentist messing up my plans?"

That's a direct quote from a story Dr. Karen Yoder likes to tell of our first meeting in the fall of 2000. Karen was just coming on board at IUSD and had carefully arranged a meeting with Dr. George Willis, then associate dean for Clinical Affairs, to request permission to take dental students to Mexico on an alternative spring break experience.

This was breaking new ground for IUSD, and Karen didn't want anyone or anything to "mess up her plans." She was pretty sure this unknown Carlson guy was there to put the brakes on.

What she didn't know was that I had the same goal. When I heard that this Karen person was having a meeting with Dr. Willis to talk about an "alternate spring break" in Mexico, I had to be in that meeting. Floating a similar idea for Haiti in previous years hadn't gone very far, but the campus environment was changing, and this sounded like a great opportunity to jump in.

The meeting with Dr. Willis went well. Karen found out we were on the same page, and along with Dr. Angeles Martínez Mier, we began a significant chapter in the history of IUSD pedagogy with an elective course now known as Global Service Learning, providing global oral health care opportunities for more 500 students in the past 17 years in impoverished

communities in Kenya, Haiti, Mexico, Vietnam, Guatemala, Ecuador and a South Dakota Indian reservation.

Karen Masbaum Yoder earned four degrees from IU: Dental Hygiene, a BS in Dental Hygiene Public Health, an MSD with a major in Public Health and a PhD in Dental Science and Health Policy. She's one very smart and accomplished woman and, by her own admission, a little pushy.

Back in 1962, after achieving a dental hygiene degree, she stuck around IUPUI to get her BS primarily because she met this handsome dental student by the name of Keith Yoder and wanted to stay on campus to be closer to him. That all worked out in an exemplary way. They married, started a practice in Goshen, Ind., and had four children – pretty much the ideal Hoosier dental family.

But after 10 years of practice, they wanted to have the experience of living and working in another culture; preferably East Africa. In a very short sequence of events they found a position in Tanzania, a sponsoring organization and a dentist to take over the practice until they returned. No longer the typical Hoosier dental family.

In her commencement address to the 2017 IUSD graduates Karen said, "Those five years in Kenya were filled with dynamic, life-shaping experiences for our family. Our decision to take a risk profoundly impacted all of our lives."



Karen Masbaum Yoder's 1962 Dental Hygiene composite photo



The Yoder's at Keith's induction into the International College of Dentists in 1995



Drs. Yoder and Carlson, third and fourth from left in the front row, are the faculty supervisors at the Student Outreach Clinic, where student volunteers provide oral health care at no charge to an underserved community on Indianapolis' near eastside.

Their four children, now all successful adults, would not have traded those years for anything. Ask any of them for Africa stories; they have some great ones.

The Africa experience put Karen on the path to dental public health. When the Yoder family returned to Fort Wayne in 1978, Karen resumed teaching dental hygiene part time in Fort Wayne while also working at the Indiana State Department of Health in Indianapolis and completing her MS and PhD in dental public health at IUSD.

At the dental school, Karen has made a profound impact in the areas of oral public health and advocacy. Her most recent title is director of Community Engagement and Health Policy, and professor of Preventive and Community Dentistry. In this role, she has been a tireless advocate for the underserved. She developed the Seal Indiana program for children from low-income families, which has provided dental examinations, fluoride treatments and protective sealants for more than 30,000 child visits at Title I schools and Head Start programs.

Karen singlehandedly created a program in which fourth-year dental students provide services for two-week periods at federally qualified health centers around Indiana. She has been one of the faculty advisors for the Student Outreach Clinic (SOC), a student organized Saturday safety-net clinic in Indianapolis, generating hundreds of thousands of dollars in grant support for the SOC, veterans and now victims of domestic violence. If there was grant money available for vulnerable populations, Karen found it, to the tune of \$3 million over her career.

Additionally, Karen has published dozens of articles and book chapters. One of her most significant contributions is her seminal "A Framework for Service-Learning in Dental Education" published in the *Journal of Dental Education*. She is a sought-after speaker at local, national and international venues on service-learning, public health and preventive dentistry.

Yet Karen is quiet about her accomplishments and prefers to work in the background. "Here, let me do this, but you do

the speaking, OK?" is a common refrain. She is absolutely allergic to being in photos, and she won't like this tribute, but all of our alumni deserve to look behind the curtain of her private works for the public good and see a little bit more.

It's fun to name just a few of her many awards and honors. Among the best are the IUPUI Chancellor's Certificate of Excellence, the IU Alumni Association Maynard K. Hine Medallion, the Indiana Governor's Distinguished Hoosier Award, the IU Thomas Ehrlich Award for Service Learning, the IU Alumni Association Distinguished Service Award, the Dental Hygiene Distinguished Alumni Award and many others. Programs she has directed have similarly gathered awards, including the IUPUI Chancellor's Community Award for Excellence in Civic Engagement, the ADA Golden Apple Award, and the (national) President's Higher Education Community Service Award.

After 50 years of service in oral public health, Karen is officially retiring from IUSD. She deserves a little break from the frenetic pace that she has maintained her entire life, and plans to be closer to her children and grandchildren. I expect she will still keep some ties here, especially related to our relationship with Moi University in Kenya, as she is the only IUSD faculty member who speaks Swahili.

For me, that infamous meeting as that darned operative dentist has developed into a world-class friendship and kinship revolving around service and teaching. Our interactions have provided some of the most professionally significant and enduring experiences of my career, and the same can be said for all the students and patients she has touched.

Karen, accept a heartfelt thank you for your many contributions to the IU School of Dentistry, to the profession and mostly to your students and their patients.

Asante sana! Safari njema!

Thank you very much! Have a good journey!

Dr. Timothy Carlson is professor of Cariology, Operative Dentistry and Dental Public Health and director of Comprehensive Care Clinic A.

PASSAGES



Donald Tharp

Donald Tharp (DDS'64), professor emeritus of Operative Dentistry and retired associate dean for clinical affairs, died May 3, 2017, in Danville, Ind.

Before joining the IUSD faculty, Dr. Tharp served as a dental officer in the Vietnam War and had a private practice in Greencastle, Ind.

During his tenure at the dental school, he developed and directed IUSD's top-ranking TEAM Clinic, which allowed students to learn in a private practice setting with multiple chairs, dental assistants and a dental hygienist. "The TEAM Clinic developed by Dr. Tharp was the best experience at the dental school for me," said Dr. George Willis (DDS'79), retired associate dean for Clinical Affairs and Dr. Tharp's student.

Dr. Tharp also invented the Tharp carver, an ergonomically designed amalgam carver used at the dental school today.

"Don Tharp was the essence of a gentleman and a professional," said Dr. Lawrence Goldblatt, dean emeritus. "From the time I first met him

when we were both young faculty members just starting our academic careers here at IUSD, I have always looked up to him as splendid personal and professional role model to both his students and colleagues. A dedicated professional and educator of the highest caliber, he was at the same time an extremely and genuinely humble man. I have missed him since he retired and will always be grateful for his friendship."

Dr. Tharp served on the Danville Town Council as park commissioner, as a church elder and on the Little League Baseball Board. He was a lifetime Chicago Cubs fan and got to see them win the World Series in 2016. He is survived by his wife, Gail, daughter Maureen (Steve) Elliott, sister Marleen (Kenny) Ames and grandchildren.

In support of a nephew who recently lost his life to ALS, the family is asking that donations be made to BlackRock College Advantage 529, PO Box 9783, Providence, RI 02940, Acct. #0005364104.

1940s

Max C. Burke, DDS'48, Carmel, Ind., Jan. 5, 2017
William F. Castle, DDS'47, Stuarts Draft, Va., Mar. 15, 2017
Peter P. Ferrini, DDS'47, Munster, Ind., Jan. 10, 2017
John T. Kirchhoff, DDS'47, New Baltimore, Mich., Mar. 10, 2013
Robert A. Makielski, DDS'44, Mishawaka, Ind., April 21, 2017

1950s

Joseph C. Cassidy, DDS'52, Greenwood, Ind., Feb. 19, 2017
R. Joseph Clark, DDS'56, Ortho'74, Seymour, Ind., Jan. 23, 2017
Max E. Copeland, DDS'51, Greenwood, Ind., April 29, 2017
Lt. Col. Raymond L. Dennany, DDS'59, Brazil, Ind., Jan. 19, 2017
Robert B. Erwin, DDS'58, Greenfield, Ind., April 27, 2017
James A. Evans, DDS'59, Tucson, Ariz., Feb. 11, 2017
David A. Ferguson, DDS'56, Medford, Ore., Mar. 25, 2017
Alvin J. Grayson, DDS'52, New York, Feb. 16, 2017
James F. Grimes, DDS'59, Long Beach, Ind., April 7, 2016
Ronald L. Hauswald, DDS'57, Franklin, Ind., Dec. 26, 2016
Beverly Ann (Buroker) Hopkins, ASDH'55, West Lafayette, Ind., April 5, 2017
Charles E. Hutton, DDS'52, Rochester, Ind., Mar. 10, 2017
John F. Krach, DDS'58, Fort Wayne, Ind., April 17, 2017
Robert W. Maxedon Sr., DDS'52, Evansville, Ind., Feb. 14, 2017
James G. McCrory, DDS'52, Columbus, Ind., June 11, 2016
Richard T. Newton, DDS'56, Columbus, Ind., Nov. 21, 2016
Norrene (Martin) O'Malley, ASDH'59, Phoenix, Ariz., Mar. 1, 2017
Robert B. Scircle, DDS'54, Elwood, Ind., May 16, 2016
William E. Stucker, DDS'55, Madison, Ind., Jan. 21, 2017
Joan L. (Kline) Yoder, DH'54, BS DH'67, ASDH'77, Bremen, Ind., May 13, 2010

1960s

Donald F. Bowers, Peds'64, Columbus, Ohio, Dec. 14, 2016
Ronald G. Jones, Crown/Bridge'65, Montreal, Quebec, Oct. 9, 2016
John D. Knight, DDS'65, Martinsville, Ind., Jan. 23, 2017
James L. Lee, DDS'65, Springfield, Mo., Jan. 20, 2017
Richard A. Martens, DDS'66, McMinnville, Ore., Dec. 12, 2016
Jerry L. Parnell, DDS'66, Columbia City, Ind., Jan. 26, 2017
Donald R. Tharp, DDS'64, Danville, Ind., May 3, 2017
Joyce E. (Hudson) Willis, DH'66, BS DH'67, ASDH'77, Jamestown, Ind., April 4, 2017
Ronald W. Wonso, DDS'69, Portage, Ind., Nov. 25, 2016

1970s

Dennis L. Duffield, Peds'74, Kalamazoo, Mich., March 1, 2017
Cathy J. (Smole) Elliott, ASDH'72, Elkhart, Ind., Jan. 25, 2017
Anthony K. Oexman, DDS'73, Phoenix, Ariz., Dec. 10, 2016
Thomas E. Tune, DDS'74, Jacksonville, Ark., April 7, 2017

1980s

Lawrence F. McAtee, DDS'80, Colorado Springs, Colo., Mar. 30, 2017
Farrell L. Simmerman, DDS'82, Lafayette, Ind., Dec. 26, 2016
Lucy T. White, DDS'82, San Pedro, Calif., Nov. 14, 2016

1990s

Gregory J. Klinker, DDS'95, Central Lake, Mich., July 7, 2009



Professional Pathways: Staying Connected

Indiana University School of Dentistry's new digital job board connects alumni and graduates for job placement.

Looking for a job? Simply log on to add your résumé.

Looking for an associate? Sign up as an employer to access our graduates.

<https://iupui-dentistry-csm.symplicity.com/>

Questions: Office of Admissions and Student Affairs – 317-274-8173 – OASmail@iupui.edu



from the **ASSISTANT DEAN
OF DEVELOPMENT**

John Hoffman

GIVING TO IUSD *A Family Affair*

Over the nearly 15 years I have been so fortunate to serve IUSD, I cannot help but notice one outstanding characteristic of alumni that seems to be more prominent than any other – relationships.

Whether it is family legacies in the profession of dentistry or the strong friendships among classmates and peers, it is obvious that the relationships formed while attending dental school are strong, enduring and important in people's lives. At alumni gatherings and events, one does not have to look very hard to observe entertaining stories of dental school days and see the camaraderie and genuine friendships that continue to strengthen and flourish among classmates and other fellow IUSD alumni.

Fundraising and development over the next few years will be extremely important and imperative to the future success of IUSD. The technological changes in dentistry, combined with the need to maintain and continue to attract first-class faculty, staff and students, will shape our future ability to educate and supply the dentists of tomorrow. As dental education evolves and changes, so does the impact private dollars can have on IUSD's ongoing ability to provide a superb dental education. Perhaps most important, your loyal support allows us to continue to provide invaluable services in the communities in which we reside and thrive. Now more than ever, the generosity of our dental family is needed to continue our mission of educating the next generation of leaders in the dental profession.

Please take some time to read about the two new additions to our development team. Ms. Melissa Evans and Mr. Adam Van Zee have joined us, and they bring both knowledge and an energy that will only enhance our ability to engage more alumni and friends in philanthropic partnerships with IUSD.

As we move forward in our development efforts, we will keep you up-to-date on the exciting people and projects that are enhancing IUSD's ability to educate tomorrow's dental professional. Please make supporting IUSD a family affair.

As always, thank you for your continuing generosity, loyalty and thoughtfulness.

Best regards,

John Hoffman

Assistant Dean of Development

Indiana University School of Dentistry

jhoffma@iu.edu

(317) 274-5313

Welcome Adam Van Zee and Melissa Evans to the fundraising team

Adam Van Zee is a graduate of Wabash College and was most recently a major gifts officer at his alma mater. He has been appointed major and planned giving officer for both the IU School of Dentistry and the IUPUI School of Physical Education and Tourism.

Melissa Evans is the new director of annual giving. She joins IUSD from Ivy Tech Central Indiana where she was the assistant director of development. She started her development career at the Indiana University Foundation and earned a master's degree in student affairs in higher education at Indiana State University.



WELCOME



Scholarships, professorships, facility upgrades, programmatic aid – your family's plans can impact current and future students and the life-changing experiences they receive at IU School of Dentistry.

Explore your options

Learn about the many different ways to make an impact to guide your family's financial strategies and any possible charitable solutions.

Read up

Request additional information from us and we can provide a more in-depth look at the benefits of each different vehicle.

Talk to us

If you want to include IUSD in your estate plans, we can help.

Options Include:

- Life Income Plans
- Gifts of Cash
- Beneficiary Designations

Contact **Adam Van Zee**, Major and Planned Giving Officer, at acvanzee@iupui.edu or (317) 278-2852

THE HINE LEGACY SOCIETY

The Hine Legacy Society is dedicated to the philanthropic spirit of alumni and friends of Indiana University School of Dentistry who have included the school in their estate plans. The name of the society honors the memory of Dr. Maynard K. Hine, longtime dean of Indiana University School of Dentistry, and first chancellor of IUPUI.

Honor Roll

Dr. Don* and Ms. Bobbie Arens
 Dr. L. Rush Bailey Estate*
 Dr. Larry and Ms. Carol Beachy
 Dr. Stephen* and Ms. Alice Beeker
 Dr. Rollie and Ms. Naomi Bennett Estate*
 Dr. David Bleeke
 Dr. M. John and Ms. Lorraine Borkowski
 Dr. Reinhard* and Ms. Marlise* Bubenzer
 Dr. Timothy and Ms. Ann Carlson
 Dr. Richard and Ms. Nancy Christiansen
 Dr. Alvin Chung
 Dr. Duane and Ms. Karen Compton
 Mr. Mark Dirlam and Mr. Daniel Dovenbarger†
 Dr. Roland and Ms. Janis Ditto†
 Dr. M. Tim Dunfee
 Dr. Clayton Dunton*
 Dr. Richard and Ms. Shirley Ellsworth
 Dr. Erin Evans
 Ms. Doris Gene Alber Ferrari
 Drs. Robert and Janet Fisher
 Prof. A. Rebekah Fisk Estate*
 Dr. James and Ms. Lana Fritts†
 Dr. I. Lester Furnas Estate*

Dr. LaForrest* and Ms. Alfreida Garner
 Dr. Lynn Gassoway and Mr. Albert Reichle
 Dr. Morris Gavin*
 Dr. H. William and Ms. Kathryn Gilmore
 Ms. Judith Goldblatt*
 Dr. Lawrence Goldblatt
 Dr. Joseph Grider
 Col. Jack Hamlin* and Ms. Dora Hamlin
 Dr. Gene and Ms. Judith Hedrick
 Dr. Hala Zawawi Henderson
 Dr. Richard Henry Estate*
 Mr. M. Kiplinger Hine, Jr.*
 Dr. William Hine, Sr.
 Dr. Larry and Ms. Judith Hodge
 Ms. Marjorie Hohe
 Ms. Ama Huckelberry*
 Dr. Ken and Ms. Kathy Hyde
 Dr. Guy Janssen
 Dr. Joseph Jarabak Trust*
 Dr. Donald and Ms. Phyllis Jennings
 Dr. Donald Johnson*
 Dr. R. Stephen and Ms. Maureen Lehman
 Mr. Steven Levinson
 Dr. Vance Lopp†
 Dr. Frank Loskot*

Mr. James and Ms. Deborah Lotz
 Dr. Ralph* and Ms. Sarah Jane* McDonald
 Mr. James and Ms. Susan Miller
 Dr. Robert and Ms. Nancy Modlin
 Dr. Terry and Ms. Nancy Pampel
 Dr. Phillip and Ms. Ruth Ann Pate
 Dr. Henry Plaschkes*
 Dr. Jeffrey and Ms. Catherine Platt
 Ms. Mayro Porter*
 Dr. J.M. Ross*
 Dr. Ron and Ms. Barb Scheele
 Dr. Leonard and Ms. Christine Scott Trust
 Dr. Pamela Steed
 Prof. Marjorie Swartz*
 Dr. Robert* and Ms. Marjorie* Tarplee
 Dr. Charles and Ms. Jacquelyn Tomich
 Dr. Robert Walden*
 Dr. Marion Warpenburg*
 Dr. Lucy White*†
 Anonymous
 Anonymous

* Deceased

† New members

HINE LEGACY SOCIETY MEMBERS GATHERED AT A DINNER RECEPTION ON APRIL 21, 2017, AT THE WOODSTOCK COUNTRY CLUB IN INDIANAPOLIS.





1. Three generations descended from Dr. Maynard Hine, IUSD dean and IUPUI's first chancellor. From left, William and Betsy, Ellie, William Jr. (DDS'96, GPR'97) and Michelle Hine.
2. Michael (DDS'79, OMFS'82) and Marcha Bennett
3. Cindy and Jess (DDS'81) Holler
4. Members of the DDS class of 1980, from left, Mark Thomas, Joe Heidehman, Barry Ray, Steven Buedel, George Zundo and Jeffrey Dalin
5. Mary and Todd (DDS'85) Briscoe with Lesley Gilbert (DDS'86, GPR'87) and Gary Schinbeckler (DDS'72, OMFS'78)

6. Vicki and Bill (DDS'58) Hart
7. Becky and Thomas (DDS'68) Lapp
8. Harley (DDS'79) and Christine Houghton
9. Guthrie Carr (DDS'54) with his daughters Margaret Garrett and Carol Kiefer
10. Christy (DH'80) and Angelo Julovich (DDS'82)
11. Nancy and Jeffrey (DDS'82) Rector
12. Leonard (DDS'73) and Christine Scott



13



14



15



16



17



18



19



20



21

13. John Hoffman, assistant dean of development, shares about the meaningful relationships Hine Legacy Society members have with the dental school.

14. Karen and Mark (DDS'80) Thomas

15. James (DDS'65) and Lana Fritts were inducted into the Hine Legacy Society this year.

16. Board of Advisors Chair Pamela Steed (DDS'83, Dental Diag Sci'90) and Peter Furno

17. Ray Dubea and Sue Green (DDS'70)

18. The family of Ron Ditto (DDS'69, Peds'74) celebrated his induction into the Hine Legacy Society. From left, daughter-in-law Beth, son Marcus (DDS'07, Peds'09), wife Jan, Ron, and daughters Meredith Haines, Laura Wellington and Erinn Speer

19. Caroline (DH'65, Public Health DH'66) and Fred (DDS'64, Perio'66) Robbins

20. Beverly and Kenneth Spolnik (DDS'75, Endodontics'78)

21. David (DDS'99, GPR'00, Peds'02) and Kelly Morgan



22. Lucy and John Williams, Dean

23. Biomedical and Applied Sciences Chair Jeffrey (DDS'84, Dental Materials'96) and Catherine Platt

24. Sandra and Chad (DDS'93) Leighty

25. Executive Associate Dean Michael Kowolik and Joan Kowolik, director, Pre-doctoral Pediatric Clinic

26. Joe Rinard (DDS'55)

27. Dan Dovenbarger and Mark Dirlam, graphic designer, Dental Illustrations, were inducted into the Hine Legacy Society this year. They established a trust in honor of Dirlam's uncle, Dr. James Dirlam, a beloved oral maxillofacial surgeon on faculty in the 1970s and 1980s.

28. Kenneth (DDS'75, Ortho'79) and Kathy Hyde

29. Robert (DDS'72) and Lillian Stokes

30. New Hine Legacy Society inductee Vance Lopp (DDS'65)



News from the Office of Continuing Education

The CE Office is moving! On May 15, the Office of Continuing Education will be relocated to the Health Science Building. The new address is 1050 Wishard Blvd, Suite 2008. Phone and email will remain the same – dsce@iupui.edu and 317-278-9000. Parking is available in the Wilson St. Garage, next door at 811 Wilson St.

Along with the move, we are busy planning the **Faculty Focus** and **Hygiene Series** that will begin in the fall as well as certification courses for dental assistants. Look for the CE brochures in the mail for more information.

New this year... in conjunction with the new **Center for Implant, Aesthetic and Innovative Dentistry**, Drs. Dean Morton and Waldemar Polido will be offering a series of courses on **dental implants** and the latest in dental **digital technology**.

This fall will also feature the **Fifth Biennial Orthodontic Burststone Symposium: Practical Applications in Biomechanics**, October 5-7. Visit the CE web page for information or to register at <http://go.iu.edu/1sL7>.

Also returning is the **Mini-Residency in Pediatric Dentistry**, November 8-11. For information, please visit <http://mrpd.dentistry.iu.edu>.

Don't forget! Licensure renewal is due by **March 1, 2018**. For information on continuing education requirements and to renew your license, visit the Indiana Professional Agency, IN State Board of Dentistry at <http://www.in.gov/pla/2393.htm>.

We are here to help with lifelong learning in Dentistry.



INDIANA UNIVERSITY
FULFILLING *the* PROMISE



INDIANA UNIVERSITY SCHOOL OF DENTISTRY

**SATURDAY
JUNE 10
2017**

**IUSD Alumni Reunion
and Class Dinners**
Huckelberry Golf Outing
Location: French Lick Resort
French Lick, IN

**Saturday
September 30
2017**

**IU Dental Hygiene
Class Reunions**
10:00 am – 2:00 pm
Location: IU School of
Dentistry

**Monday
September 11
2017**

**IU Periodontic Alumni
Reception**
6:30 – 8:00 pm
Location: Westin Boston
Waterfront
Boston, MA

**Friday
October 20
2017**

**IUSD Reception at the
ADA Meeting**
6:30 – 8:00 pm
Location: TBD
Atlanta, GA

For more information about these events contact Karen Jones, Office of Alumni Relations, at 317-274-8959 or kdeery@iupui.edu

Indiana University School of Dentistry 7 Night Western Caribbean Cruise January 27–February 3, 2018

On Board the Celebrity Cruise Ship *Equinox*

Cruise Itinerary

1/27/18	Miami, FL	4pm (Set Sail)
1/28/18	Key West, FL	7am – 5pm
1/29/18	At Sea	
1/30/18	Puerto Costa Maya, Mexico	8am – 5pm
1/31/18	Cozumel, Mexico	7am – 4pm
2/1/18	George Town, Grand Cayman	10am – 6pm
2/2/18	At Sea	
2/3/18	Miami, FL	7am



Cruise Pricing

The price includes continuing education, alumni receptions and other special activities.

Inside Stateroom (10): \$879, per person, double occupancy
Standard Ocean View (07): \$1,099 per person, double occupancy
Veranda Stateroom (1B) with Balcony: \$1,349 per person, double occupancy
Veranda Stateroom (1A) with Balcony: \$1,379 per person, double occupancy
Concierge Class 3 (C3) with Balcony: \$1,449 per person, double occupancy
Concierge Class 2 (C2) with Balcony: \$1,489 per person, double occupancy
Aqua Class 1 (A1) with Balcony: \$1,679 per person, double occupancy
Early Booking Discount Available in the A1, C2, and C3 categories based on inventory.

Single, Third and Fourth person and Suites pricing available upon request (subject to availability and not guaranteed).
Price does not include taxes & fees of \$135.77 per person (subject to change) or gratuities.
A \$500.00 deposit per stateroom is due at time of booking. Final payments are due October 11, 2017.

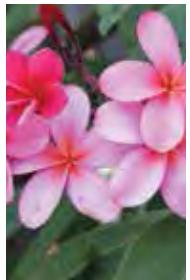
**Please call Ambassadors Cruise Desk at 317-218-0802 or
800-225-9919 Mon.-Fri. between 8:30 a.m. – 5:30 p.m. to book
your cruise or ask questions.**

IUSD offers another great cruise in conjunction with the American Dental Association's Annual Session in Hawaii 2018

Join Dean John Williams and IUSD Alumni for an 8 day/7 night cruise of the Hawaiian Islands on Norwegian Cruise Line's *Pride of America*. We will sail from Honolulu on Saturday, October 20, 2018.

Cruise Itinerary

10/20/18	Honolulu	7pm Set Sail
10/21/18	Kahului, Maui	8am – overnight
10/22/18	Kahului, Maui	Depart 6pm
10/23/18	Hilo	8am – 6pm
10/24/18	Kona	7am – 5:30pm
10/25/18	Nawiliwili, Kauai	10am – overnight
10/26/18	Nawiliwili, Kauai / Napali Coast	Depart 2pm
10/27/18	Honolulu – Disembarkation	7am



Double Occupancy Cruise Pricing

Mid-Ship Balcony (BA)	\$2,269 pp
Mid-Ship Balcony (BB)	\$2,259 pp
Balcony (BC, BD, BE)	\$2,249 pp

Single, Third & Fourth guest and Suite pricing available upon request (subject to availability and not guaranteed)

Deposit: \$250 per person, Final payment: July 9, 2018

Additional port taxes & fees: \$120.79 per person*

Additional government taxes & fees: \$100 per person*

*Subject to change

**Please call Ambassadors Cruise Desk at 317-218-0802 or
800-225-9919 ext. 283 Mon.-Fri. between 8:30 am – 5:30 pm
to book your cruise or ask questions.**



SCHOOL OF DENTISTRY

INDIANA UNIVERSITY
Indianapolis

ALUMNI BULLETIN

Office of Development
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We did it!



CONGRATULATIONS CLASS OF 2017!