

**Indiana University School of Dentistry Highlight Report 2011**  
<http://www.iusd.iupui.edu/>

**Teaching and Learning**

- Preclinical Teaching Laboratory Space Renovation- These facilities employ state-of-the-art learning technologies and will enable us to further improve the learning outcomes of preclinical education by creating a technology-enhanced simulation environment. This environment should lead to more effective learning and more authentic assessment of student learning.
- Preclinical bench laboratory (104 stations) construction was completed and inaugurated in fall 2010.
- Construction for the 104-station clinical simulation laboratory (SB05) was initiated in August 2010 with an expected completion date of August 2011.
- Construction of a 24-station auxiliary preclinical simulation laboratory (S315) was also completed in the fall of 2010.
  
- DDS Curriculum Renewal- The DDS curriculum renewal is focused on improving the health care of patients by improving the teaching and learning experiences of our students. The goal of the renewal is to build upon our strengths in student-centered education and to more fully expand interactive team-based learning across the four year curriculum. We are guided in this process by the American Dental Education Association [Curriculum Change and Innovation](#) (CCI) project.
- Newly restructured curriculum planning group (Committee for Curricular Development) was initiated and work continues to develop the curricular concept and to plan implementation of an update to our nationally recognized DDS curriculum.
- A comprehensive review of the current Institutional Competencies was initiated to determine areas of concern relative to newly released [Accreditation Standards](#).
  
- DDS Program Electronic Testing
- Implementation of a secure-environment, web-based testing process using the [Questionmark Perception](#) software began with the DDS class of 2014 in July of 2010. The ultimate goal of this process is to replace paper-based examinations and to enable a wider variety of test item types to be used in assessing student learning outcomes.

**Research, Scholarship and Creative Activity**

The Oral Health Research Institute has served as the University's core research facility for oral health care, oral health science for over four decades. The Institute's research has contributed significantly to local, state, national and international oral health science. By employing over 70 full-time faculty and staff, participating in numerous industry, government research, clinical and testing programs, it is a major participant in local economic development.

- [Dr. Tien-Min Gabriel Chu](#), Restorative Dentistry, Division of Dental Biomaterials was awarded a research collaboration contract with Shofu, \$362,000, *Biomechanical and Histological Evaluation of Shofu Dental Implants in Canine*.

- [Dr. Angeles Bruzzaniti](#) and [Dr. L. Jack Windsor](#), Oral Biology received a total of three internal funding research awards. Collaboration in Translational Research Pilot Grant Program (CTR): Dr. Bruzzaniti \$37,280, *Megakaryocytes and Pyk2 as Anabolic Stimulators of Bone Formation* in collaboration [Dr. Melissa Kacena, Orthopedic Surgery](#); and Dr. Windsor \$75,000, *Bone and Connective Tissue Regeneration Agent for Osteoporosis* a partnership with [Dr. Matthew Allen, Anatomy and Cell Biology](#). Dr Bruzzaniti also received a Collaborative Research Grant \$69,146, *Role of Kalirin in the Local and Central Control of Bone Mass*, a partnership with [Teresita Bellido, Anatomy and Cell Biology](#). These awards will cultivate translational research partnerships that should lead to larger, externally funded research.
- [Dr. Katherine Kula](#), Orthodontics and Oral Facial Genetics, was awarded three-year research funding for the establishment of a collaborative research Signature Center: [Three Dimensional Imaging of Craniofacial Dental Complex Center \(ICCC\), \\$300,000.](#)
- [Dr. Domenick Zero](#) and faculty of Preventive and Community Dentistry/Oral Health Research Institute continue to receive numerous lucrative sponsored research industry awards, \$2,967,210, during FY 10-11. These awards consist of clinical trials, *in situ* model studies, bio research, and laboratory testing. Research awards are mainly related to the prevention of dental caries and [dental erosion](#), including evaluating and improving the [clinical efficacy of fluoride products and optimizing oral hygiene practices](#).

### **Civic Engagement**

The IU School of Dentistry (IUSD) Office for Civic Engagement, established in 2011, coordinates scholarship and creative activity locally, state-wide and globally to foster skills in working effectively with diverse populations in diverse settings. The office also serves as a central point for public and media inquiry about access to oral health services and best practices. The office secures funding to enhance civic engagement and service-learning outcomes.

- Seal Indiana, IUSD's school-based dental sealant program, provided services for more than 2,000 disadvantaged Indiana residents in 2010. Since the program's inception in 2004, more than 23,000 residents have been served. Seal Indiana was cited as an exemplar in IUPUI's 2011 President's Higher Education Community Service Honor Roll with Distinction. [www.sealindiana.org](http://www.sealindiana.org)
- In 2011, through the leadership of Drs. Timothy Carlson and Angeles Martinez-Mier, IUSD international/intercultural service-learning participants included 47 dental students/residents and 12 IUSD faculty members. More than 290 students and faculty have participated in the program since 2001. The program includes partnerships in seven countries (Brazil, Ecuador, Guatemala, Haiti, Honduras, Kenya and Mexico). Two sites work with universities that are designated as strategic partners for IUPUI. The program has raised more than \$370,000 to support its service-learning and research components. <http://isl.iusd.iupui.edu/>.
- IUSD faculty and students worked side by side with faculty and students of Moi University School of Dentistry to establish Kenya's first community-based preventive and restorative

program serving children in primary schools and “street kids” who live independently on Eldoret’s streets.

- IUSD’s partnership with the Amish community in LaGrange County received the 2011 Special Service Award from Indiana Dental Association and the 2011 IUPUI Chancellor’s Community Award for Excellence in Civic Engagement.
- The 7<sup>th</sup> annual Oral Health Policy Forum engaged fourth year dental students and IUSD faculty members in learning and practicing skills needed for effective legislative advocacy to promote healthful public policy.
- Four IUSD students, Stephanie So, Miriam Viernes, Jennifer Sitjar and Kurush Savabi, were named Schweitzer Fellows as a part of Indiana’s newly established Schweitzer Fellows Program, the thirteenth in the USA. The Schweitzer Fellows’ program is dedicated to fostering a pipeline of emerging professionals who enter the workforce with the skills and commitment necessary to address unmet health needs. <http://www.schweitzerfellowship.org/>
- Faculty member, Dr. Karen Yoder, was a member of a national panel of dental educators tasked with developing curriculum, best practices, and career pathways for the dental therapist; a category of dental provider that is new to the United States.

### **Diversity**

The mission of the Office of Diversity, Equity, and Inclusion at Indiana University School of Dentistry is to develop strategies to improve the diversity of the oral health care workforce and to advance the quality of oral health in Indiana. The new office will expand the pipeline of qualified underrepresented applicants for our programs and work to increase education and awareness in all areas of oral health for students, faculty, and staff. Structured programs will be created to provide mentoring, academic enrichment, and experiential experiences for students. Relationships will be enhanced and established with funding agencies, educational institutions, and other health professionals.

- New summer programs include the Dental Summer Undergraduate Research Program (DSURP) where students were matched with IUSD faculty to complete research activities during the summer. Students will present posters on their research at the end of the program.
- In June 2011 presentations were made to 12 Indiana Northwest Area Health Educational Center (AHEC) students. Students were able to place amalgam fillings in pre-cut plastic teeth and learn about dental terminology and instrumentation. The residential Dental Summer Institute of 2011 hosted its one week session at IUSD for 8 high school students. The School continues to participate in programs of the Northwest Indiana Area Health Education Center and the Northeast Indiana Area Health Education Center.
- There were several K-12 school visits in the Indianapolis area to begin to establish and maintain relationships with additional schools, churches, community organizations, and other groups to inform and expand the pipeline of perspective Indiana URM students.

- Collaborative Partnership Planning with community and school leaders has been initiated. They include regional high school pre-dental clubs, professional shadowing opportunities, undergraduate research, and community oral health awareness activities.
- The School of Dentistry participated in the Indiana Black Expo “Healthy Smiles Dental Pavilion,” the National Dental Association conference, and the Local National Dental Association dinner for students. Throughout the academic year, the school worked with the tenth and eleventh grade dental cohorts at Crispus Attucks Medical Magnet High School.
- The School of Dentistry continually reinforces recognition of the need to increase the number of underrepresented minorities in the various dental school programs by participating in the campus diversity plan.
- The Doctor of Dental Surgery (DDS) Program has 12 underrepresented minority (URM) students prepared to enter the first year class in 2011; a vast improvement over previous years and we look forward to continuing to enhance. The Dental Hygiene Program has accepted 2 underrepresented minority (URM) students for 2011.
- As a part of Key Learning High School Apprenticeship Program, the school had two students spend at least 100 hours at Indiana University School of Dentistry. The students observed in the clinics, attended classes, and completed a formal paper/presentation for a grade.

### **Best Practices**

- Plans have been finalized to move to digital radiography throughout the school resulting in greater efficiency and best practices in current dental radiographic technique. The hardware has been ordered. Training of faculty, staff and students is ongoing with full implementation set for January 1, 2012.
- The School of Dentistry was fortunate to be one of the first units on the IUPUI campus to implement the Service with Distinction Program. The clinic staff were chosen to be our initial group. The initial baseline survey results of our patients, faculty, staff and students were very encouraging. There were areas identified for improvement in effectiveness of process and best practices. The school is now looking at opportunities, potential actions and next steps.
- The School of Dentistry is working with the Simon Cancer Center to develop a dental equipped exam room consisting of a dental chair and unit as well as a digital panoramic radiographic system. This will allow for a complete dental screening procedure prior to cancer patients beginning their treatment. This dental presence in the Simon Cancer Center will hopefully encourage medical and dental collaboration as well as improved health care for the patients.

### **External Awards and Appointments**

- Dental student Ewelina Ciula represented the IU School of Dentistry in a group that met at the University of Southern California to lay the groundwork for the creation of a new organization with dental school chapters that will focus on ethics and professionalism development. Ms. Ciula joined nine other U.S. dental students in identifying the vision and core values and drafting an initial strategic plan for the new Student Professionalism and Ethics Association (SPEA), to commence in fall 2011. IU professor Dr. Larry Garetto, past president of the American Society for Dental Ethics, participated as an American College of Dentists adviser. <http://www.ada.org/news/5830.aspx>
- Dr. Henry Swenson was honored at the 54<sup>th</sup> annual meeting in Chicago of the Midwest Society of Periodontology. Dr. Swenson was one of a small number of men who created the society and, at age 94, he is the only living founding member. Dr. Swenson retired from IU in 2010 as Dentistry's longest serving professor after 67 years on the part-time faculty. <http://www.ada.org/news/4828.aspx>
- In 2010, longtime IU faculty member Dr. Steven Haug was elected president-elect of the American Academy of Maxillofacial Prosthetics, a leading American dental organization. His presidency commences in fall 2011. <http://newscenter.iupui.edu/4873/IU-Dental-School-Professor-to-Lead-National-Dental-Academy>
- An IU study led by Dr. Gerardo Maupomé earned the cover spot on the September 2010 issue of the prestigious *Journal of the American Dental Association*. In a critical review of 27 separate studies published between 1976 and 2010 which looked for a link between asthma and dental caries (tooth decay), Dr. Maupomé's team found no evidence of a link. <http://communications.medicine.iu.edu/newsroom/stories/2010/asthma-and-cavities-both-common-in-kids-but-not-linked>.
- A scientific article by IU professor Dr. Sean Liu was selected by the editorial board of the *European Journal of Orthodontics* as the best article published by the journal in 2010 ("Continuous Forces Are More Effective Than Intermittent Forces in Expanding Sutures.") The award, including a monetary sum of £2,500, was presented to Dr. Liu at the 2011 European Orthodontic Society Congress in Istanbul, Turkey.
- The national Academy of Operative Dentistry selected a research project on caries (tooth decay) risk assessment by IU dental student Olga Isyutina as the best in the nation in 2010. The study was chosen among all of the projects presented by U.S. dental students at the American Dental Association meeting in Orlando, Florida.
- The Indiana Dental Association honored two exceptional IU professors in 2010. Dr. Angeles Martínez-Mier was recognized for her body of work at IU. Centerpieces of her IU career are the dental component of the Calnali, Mexico, service-learning program and the Binational/Cross-Cultural Health Enhancement IUPUI Signature Center. Dr. Steven Blanchard was honored for his work in the past academic year. His commitment to providing care for underserved populations includes his establishment of an IU dental school service-learning program in Honduras. <http://www.iusd.iupui.edu/index.php/about-us/news-and-information/awards-honor-staff-member>