



*Poster presenter Afnan AlZain, PhD student  
Research Day photos by Tim Centers*

## **12 Students, Staff, and Faculty Honored at Dentistry's Research Day**

IU School of Dentistry students, staff, and faculty celebrated 2014's top achievements in IUSD research and teaching at the school's 22<sup>nd</sup> annual Research Day, held at the IUPUI Campus Center on April 7.

The event is a collaboration of the IU School of Dentistry, Indiana Section of the American Association for Dental Research, and IUSD Student Research Group.

After a word of welcome from Dean **John Williams** and opening remarks by Dr. **Jay Hess**, dean of the IU School of Medicine and vice president for university clinical affairs, Dr. **Richard Gregory**, interim associate dean for research, introduced keynote speaker Dr. **Peter Polverini**, a professor of dentistry and dean emeritus of the University of Michigan School of Dentistry and a professor of pathology at Michigan's Medical School. Dr. Polverini is also the immediate past president of the American Association for Dental Research. His presentation was titled "Personalized Oral Health Care: Is Dentistry Prepared for a Prospective Healthcare Environment?"



*Keynote speaker Peter Polverini, left, with IN-AADR president Marco Bottino and IUSD dean John Williams*

Dean Williams and AADR Indiana Section President Marco Bottino led the awards program, which also included an announcement of the dental students who have been awarded research fellowships for the next academic year and faculty who have received the annual IU Trustees Teaching Awards.

A total of 78 posters and clinical case reports were presented on wide-ranging topics pertinent to the field of dentistry, and the Exhibits Hall featured information and products from 24 companies and organizations associated with dentistry. This year's sponsors were the **Delta Dental Foundation, Johnson & Johnson, Procter & Gamble/Crest, Shofu Dental Corporation, Indiana Dental Association,** and the **IU component of the American Student Dental Association.**

The Research Day monograph, including full summaries on each poster and clinical case presentation, may be accessed here: <https://www.dentistry.iu.edu/index.php/research/iusd-research-day/research-day-2014>.

## **FACULTY CATEGORY**



*Faculty honorees Marco Bottino and Theresa Gonzalez*

## **Indiana University School of Dentistry Alumni Association Awards**

### *Distinguished Faculty Award for Teaching*

#### **Theresa GONZALEZ**

Clinical Assistant Professor of Operative Dentistry  
Restorative Dentistry

This year's recipient of the Distinguished Faculty Award for Teaching was cited for being a teacher held in high regard, in particular her mentorship of both students and faculty alike and her development of the current IUSD Quality Assurance Policy.

After starting her IU career as a part-timer in 2000 and then serving as a full-time visiting professor/comprehensive care director in 2001, Dr. Theresa Gonzalez accepted a permanent position in 2003 as a clinical assistant professor of operative dentistry and director in the Comprehensive Care Clinics.

Before earning her IU dental degree in 1994, Dr. Gonzalez served for five years in the U.S. Navy as an Ocean Systems Technician Analyst. Her undergraduate studies during this period at New Hampshire College, the University of Maryland, and City Colleges of Chicago were applied to the BS degree in biology she earned from Purdue University on the Fort Wayne campus in 1991.

She was inducted into Beta Beta Beta National Biological Honor Society as an undergraduate and into Omicron Kappa Upsilon honor society as a dental student. In 2010-2011 she served as president of OKU's Theta Theta Chapter.

To her IU teaching post she brought expertise in practice, charitable oral healthcare, and public health as a practitioner in Pendleton, Ind.; dentist at the Marion County Health Department, where she has been involved in a dental program for migrant farmers; and volunteer dentist at St. John's Children's Clinic in Anderson, Ind.

In addition to her directorship in the Comp Care Clinics, which includes the dental students' clinical rounds, Dr. Gonzalez's extensive teaching responsibilities involve complete denture lectures and labs in the Dental Sciences II course and the third-year class's group learning seminars. She has also contributed to the students' service-learning experiences by serving as a mentor in the International Service Learning program.

### *Distinguished Faculty Award for Research*

#### **Marco BOTTINO**

Assistant Professor of Dental Biomaterials  
Division of Dental Biomaterials, Restorative Dentistry

During his young career with IU, the recipient of the Distinguished Faculty Award for Research has already acquired nearly \$2 million in research grants as a primary investigator or co-investigator, including most recently a five-year project for which he is working as P.I. to develop novel biomaterials that will regenerate tissue destroyed by periodontitis and translate these materials to clinical practice. Dr. Marco Bottino's new study is funded by a \$715,525 grant from the National Institute of Dental and Craniofacial Research of the National Institutes of Health.

As both a dentist and a materials scientist, Dr. Bottino is striving to bridge the gap between biomaterials development and their application in patient care using nanotechnology, tissue engineering, and clinical knowledge.

Dr. Bottino was appointed to the IU School of Dentistry faculty in 2010, after he completed a Ph.D. degree in materials science at the University of Alabama at Birmingham. He directs applied biomaterials and regenerative dentistry in the Division of Dental Biomaterials. In 2011, he accepted an adjunct faculty position in IUPUI's Biomedical Engineering department.

He also holds a master's degree in nuclear technology from the Institute for Energy and Nuclear Research in São Paulo, Brazil, and a dental degree from Paulista University, also in São Paulo.

In addition to his teaching and research load at IU Dr. Bottino has devoted a substantial amount of his time to the mentorship of dental and graduate student researchers and to service on the evaluation, research, and thesis defense committees of master's degree students.

He has been fully engaged in IADR/AADR activities both locally and nationally, including his current year as president of the AADR's Indiana section. He was the recipient in 2013 of the first-place Young Investigator Award from the IADR's Pulp Biology Research Group, and students he has mentored have won national AADR prizes as well.

Dr. Bottino is widely published as an author or co-author in refereed scientific journals.



## STAFF CATEGORY

### Indiana Section American Association for Dental Research Staff Award



**Marilyn RICHARDS with Dr. Bottino**  
Assistant to the Chair

## Preventive and Community Dentistry/Oral Health Research Institute

Awarded for the first time last year, the IN-AADR Staff Award recognizes staff members for the invaluable contributions they make in helping the IU dental school and its Oral Health Research Institute advance the research mission, which in turn advances IUSD's goal to be one of the best dental schools in the 21<sup>st</sup> century.

The IN-AADR is proud to bestow the 2014 award on Marilyn Richards, the longtime administrative assistant for the school's annual Research Day. In this role she has exceeded expectations year after year.

Marilyn joined the Research Day Organizing Committee in 2005, helping to give structure and continuity to IUSD's largest annual school-wide event. As one might imagine for a program that each year draws about 400 participants, a host of exhibitors and sponsors, and one of America's leading dental researchers as keynote, the "behind the scenes" work on Research Day preparation represents an extraordinary year-round challenge. Marilyn has managed myriad Research Day details with skill and dedication, and has been especially effective in developing solid, ongoing relationships with the many companies and organizations that support Research Day through their sponsorships and exhibits.

With ties to the Oral Health Research Institute that span decades, Marilyn has also served with excellence as assistant to the chair in Preventive and Community Dentistry since 2005.



*Winners of the poster and manuscript competitions, from left: Wen Lien, Himabindu Dukka, Austin Starr, Kristin Lamping, Phillip Witcher, Jessika Janoski, Allison Scully, Ruijie Huang, and Alaa Sabrah*

## UNDERGRADUATE STUDENT CATEGORY

### Johnson & Johnson Undergraduate Student Award

**Phillip WITCHER**

IUPUI Freshman Student

Poster #19: *The Effect of Fulvic Acid on Streptococcus mutans and SCC-25 Cells*  
Faculty Mentor: Jack Windsor, Oral Biology



## DENTAL HYGIENE STUDENT CATEGORY

### Elizabeth A. Hughes Dental Hygiene Case Report Award

**Jessika JANOSKI and Kristin LAMPING**

Class of 2014

Clinical Case #CC12: *Modification of Dental Hygiene Care Plan for a Dementia Patient*

Faculty Mentor: Angel Reed, Division of Dental Hygiene, Periodontics and Allied Dental Programs



## GRADUATE DENTAL STUDENT CATEGORY

### Delta Dental Award for Innovation in Oral Care Research

**Wen LIEN**

Master's Degree Student, Dental Materials

Poster #11: *Optimization of Crystalline Kinetics, Thermal Processing, and Strength of a Dental Lithium Disilicate Glass-ceramic*

Faculty Mentor: Gabriel Chu, Division of Dental Biomaterials, Restorative Dentistry

### Indiana Dental Association Best Clinical Case Report Award

**Himabindu DUKKA**

Master's Degree Student, Periodontics

Clinical Case #CC25: *Effects of Platelet Rich Fibrin Matrix on Bone Regeneration and Soft Tissue Healing in Combination with Freeze-Dried Bone Allograft in Ridge Augmentation: A Case Report*

Primary Faculty Mentor: Steven Blanchard, Periodontics and Allied Dental Programs

### Maynard K. Hine Award for Excellence in Dental Research

(for Best Research Manuscript)

**Alaa SABRAH**

PhD Student, Dental Science

Manuscript: *Effectiveness of Antibiotic Medicaments Against Biofilm Formation of Enterococcus faecalis and Porphyromonas gingivalis*

### Shofu PhD Student Oral Presentation Award

**Ruijie HUANG**

PhD Student, Dental Science

Poster #51: *Effect of Nicotine on Streptococcus gordonii Biofilm Formation and Aggregation*

Faculty Mentor: Richard Gregory, Oral Biology





## **PREDOCTORAL DENTAL STUDENT CATEGORY**

### **American Dental Association/Dentsply International Student Clinician Award**

**Allison SCULLY**

Class of 2015

Poster #38: *Chart Review of Treatment of Retained Primary Mandibular Molar Teeth*

Faculty Mentor: Joan Kowolik, Pediatric Dentistry

### **Cyril S. Carr Research Scholarship**

**Austin STARR**

Class of 2014

The Carr scholarship is awarded to a student who has demonstrated overall excellence in research at the predoctoral level. That is certainly an apt description of Austin Starr's involvement in research during his dental education at IU.

He began presenting the results of periodontics studies at Research Day during his second year of dental school. Working with faculty mentor Dr. Marco Bottino in the Division of Dental Biomaterials, Austin has produced a body of work that has included, for example, an investigation of the antibacterial efficacy of a drug-delivery system against *Porphyromonas gingivalis*. In 2013, Austin was honored twice at Research Day with the Procter & Gamble Award for Excellence in Preventive Oral Health Care and the Interschool Dental Student Research Award sponsored by the Indiana Section of the AADR.

His efforts have also been recognized at the national level: Last year the AADR awarded Justin a Student Research Fellowship; and this year, at the AADR meeting in Charlotte, North Carolina, Justin won third place, basic sciences category, in the AADR National Student Research Group Dentsply/Caulk Competition for a project titled "Metronidazole-Containing Delivery Systems – Effect on the Oxidative Burst of Human Neutrophils."

At this year's Research Day program, Austin Starr received the following three awards in addition to the Carr research scholarship for Poster #7: *Antibacterial Effect of Nanofibrous Metronidazole-Containing Drug-Delivery Systems for Periodontal Applications* (Faculty Mentor: Marco Bottino, Division of Dental Biomaterials):

### **Procter & Gamble Award for Excellence in Preventive Oral Health Care**

### **American Student Dental Association's IUSD Student Research Group Award**

### **Indiana Section American Association for Dental Research Interschool Dental Student Research Award**



## **2014-2015 Dental Student Research Fellowship Recipients**

In addition to the awards that were presented at Research Day, the dental students who have been chosen for research fellowships and who will pursue studies under the mentorship of faculty during the 2014-2015 academic year were announced. Congratulations to next year's group of predoctoral research fellows:

### ***DDS Class of 2017***

#### **Philip HOYT**

Faculty Mentor: Armando Soto, Preventive and Community Dentistry

#### **Michael LEVI**

Faculty Mentors: Ygal Ehrlich, Endodontics; Ahmed Ghoneima, Orthodontics and Oral Facial Genetics

#### **Molly OSTER**

Faculty Mentor: Gabriel Chu, Division of Dental Biomaterials, Restorative Dentistry

#### **Mark VAUGHN**

Faculty Mentor: Richard Gregory, Oral Biology

### ***DDS Class of 2016***

#### **Laura ALBRECHT**

Faculty Mentor: Richard Gregory, Oral Biology

#### **Blake BALLENGER**

Faculty Mentor: Gabriel Chu, Dental Biomaterials

#### **Zach BOZIC**

Faculty Mentor: Joan Kowolik, Pediatric Dentistry

#### **Nicholas BRASSARD**

Faculty Mentor: Ahmed Ghoneima, Orthodontics and Oral Facial Genetics

#### **Joshua EVANS**

Faculty Mentor: Marco Bottino, Dental Biomaterials

#### **Nadine FERBINTEANU**

Faculty Mentor: Ahmed Ghoneima, Orthodontics and Oral Facial Genetics

#### **Chau LEMINH**

Faculty Mentor: Richard Gregory, Oral Biology

#### **Stuart RYAN**

Faculty Mentor: Marco Bottino, Dental Biomaterials

#### **Corrie VanWANZEELE**

Faculty Mentor: Thankum Thyvalikakath, Restorative Dentistry





## Indiana University Trustees Teaching Awards



The IU Trustees Teaching Awards annually celebrate excellence in teaching in schools and units throughout the university. IUSD's five recipients for 2014 (above, from left) are:

**Sheri ALDERSON**, Division of Dental Assisting, Periodontics and Allied Dental Programs

**Richard GREGORY**, Oral Biology

**Laura ROMITO**, Oral Biology

**Stuart SCHRADER**, Oral Biology

**Kelton STEWART**, Orthodontics and Oral Facial Genetics



*Entertainment by Vertical Dimension, top row from left: Kyle Ratliff D2, Jacob Balkos D1, Quantez Freeman D3, Jordan Jenkins D3, Ryan Smith D4, George Jusu D1, Joshua Evans D2, and Grant Hardisty D1. Front: Stephanie Parker DH2, Priscilla Clinton D2, Debbie Bademosi D1, Rachel Aziz D2, Annissa Michael D3, Ashley Carlton DH2, and Saba Najamuddin D4*