

KAO Program Update 2019
University of Kentucky
Division of Orthodontics
August 15, 2019

- Once again, our Graduate Program was well represented at this year's American Association of Orthodontists Annual Meeting. Three of our full-time faculty members contributed to the Scientific Portion of the program with the following invited presentations:
 - **Dr. Jim Hartsfield** – *Genetics of TMD*
 - **Dr. Lorri Morford** – *Genetics and Facial Growth Predictions*
 - **Dr. Lina Sharab** – *Adolescent Self-image in Relation to Facial Appearance and Malocclusion*

- **Dr. Mohamed Bazina** received the Albert P. Westfall Memorial Teaching Fellowship Award from the American Association of Orthodontists Foundation. The prestigious award is designed to support the development of promising junior faculty and assist them in the development of their teaching, patient care, and research activities to their highest potential. Dr. Bazina was also nominated by the American Association of Orthodontists to serve as a Site Visitor to the Commission on Dental Accreditation (CODA) of the American Dental Association.

- **Dr. Cynthia Beeman** became a Diplomate of the American Board of Orthodontists in April 2019. She was in the first cohort to challenge the American Board of Orthodontists new Scenario-based Oral Clinical Examination. On July 1st of this year, Cindy assumed the role of Orthodontic Graduate Program Director, a position she previously held from 2007-2010. Dr. Beeman was nominated by the American Association of Orthodontists to serve as Site Visitor to the Commission on Dental Accreditation of the American Dental Association. She was appointed as a Commission Site Visitor in 2018-2019.]

- **Dr. James Hartsfield** – In addition to receiving an adjunct appointment with the University of Western Australia Dental School, Division of Oral Development and Behavioral Sciences, and the Harvard School of Dental Medicine Department of Developmental Biology, Jim presided as President at the Annual Meeting of the Midwest Component of the Edward H. Angle Society of Orthodontists in St. Pete Beach in February. He has also spoken at multiple scientific sessions and association meetings around the world, including the American Association of Endodontists Annual Session in Montreal, and the 53rd Indian Orthodontic Conference in Kochi, India, and the Spring Scientific Meeting of the Italian Society of Orthodontists in Rome

- **Dr. Divakar Karanth** (third year resident) was honored by the AAO at the 2018 Annual Session in Los Angeles with the third place finish in the Charles Schultz Resident Scholar Award for his thesis research project, titled "*3D Printed Resorbable Scaffold for Bone Regeneration*"

- **Dr. G. Thomas Kluemper** was chosen as one of the 2019 Teachers Who Made a Difference by the UK College of Education. Tom was nominated by Dr. Divakar Karanth. In his nomination, Dr Karanth wrote this about Dr. Kluemper:
“Dr. Kluemper is a passionate teacher. ... He makes sure that students understand well and reinforces the concepts so that students will never forget... We all really love him for his commitment to teaching. His students since the early 1990’s have been extremely successful...and we hope he keeps inspiring new generations of educators.”
- **Dr. Judson Knight**, in his 50% faculty appointment, Dr. Knight remains active in managing the faculty orthodontic practice at our Turfland facility. In addition, he continues to offer one of the most innovative and comprehensive, yet practical practice management courses in graduate education anywhere.
- **Dr. Lorri Morford** is currently serving in her 3rd year of a 4-year leadership track within the International Association for Dental Research (IADR) Craniofacial Biology (CFB) Group. Beginning in July of 2018, she became the CFB President and symposia organizer for the 2019 IADR Vancouver meeting. One of her greatest accomplishments as the CFB President has been to establish a new “Orthodontic & Craniofacial Clinical and Translational Research Award” in the group which will reward one young investigator \$700 for outstanding clinical and/or translational research at our next three IADR meetings thanks to support from John Wiley and Sons, Ltd.
- **Dr. Lina Sharab** was selected by the American Association of Orthodontists (AAO) to be a sponsored attendee of the Institute for Teaching and Learning Program this summer. Dr. Sharab was selected by the Southern Association of Orthodontists as the 2019 recipient of the Faculty Lecture Award. Also, as of July 1, Lina assumed the directorship of the Craniofacial Biology Externship. Finally, Dr. Sharab was also chosen as one of the 2019 Teachers Who Made a Difference by the UK College of Education. She was nominated by Dr. David Jansen who wrote this about Lina in his nomination:
“From pre-clinical labs to cephalometric research, Dr. Sharab pushed me to be observant of the smallest of details, while having a real world understanding of the scope and significance of dental medicine. She has challenged me to become a more skilled practitioner...and through her actions and expectations, made it evident that being a great healthcare provider starts with me as a person, not just a collection of degrees and exams.”
- **Dr. Anna Vu** was chosen as the 2019 recipient of the Proffit Julep Cup, given annually to an individual, alumni or friend of our graduate program who has demonstrated exceptional support, be it time, money, personal energy or all of the above. Dr. Vu and her husband James have been consistent supporters of our graduate program in multiple ways, including her exceptional design and publication of our Annual Alumni Newsletter: ***Straight Talk***.

In August, we welcomed three new orthodontic residents and the same number of externs in Craniofacial Biology.

New Orthodontic Residents:

- **Dr. Chris Fanelli**, born and raised in Lancaster, Pennsylvania, graduated with a GPA of 3.71 with a BS from the University of Utah. Chris also attended dental school at the University of Utah with a cumulative GPA of 3.97.
- **Dr. Sana Naheed**, hometown of Nizamabad, India. Sana graduated from Maharashtra University of Health Science with her Bachelor of Dental Surgery. She then earned a Master's Degree in Hospital Management from Osmania University in Hyderabad
- **Dr. Kelly Sutherland** is from Dayton, Ohio and earned her BS in Zoology from Miami University in Oxford, OH. She then came to Lexington to study dentistry where she earned her dental degree from the University of Kentucky.

New Craniofacial Biology Externs

- **Dr Rachael Huffman**, born and raised in London, KY and graduated from *summa cum laude* from Western Kentucky University with a degree in biology. She then earned her dental degree from the University of Kentucky and graduated with high distinction.
- **Dr. David Jensen** received an undergraduate degree in Biology from Brigham Young University- Hawaii, then surfed semi-professionally for two years before earning a Master's Degree from the University of Louisville in Bacterial pathogenesis. Dave completed his dental degree at the University of Kentucky where he received numerous Research Awards and Fellowships
- **Dr. Dana Veis** grew up in San Diego, CA and attended the University of California, Santa Barbara where she graduated with a degree in . She worked as an orthodontic assistant for two years prior to attending UK for dental school from which she graduated in May.

Division Research

I thought it would be appropriate to share with our friends in the KAO some insight into the wealth of research that is currently being conducted in the Division of Orthodontics at UK. The generous, annual donation from the KAO is at least in part helping fund this ongoing research:

- Developing a 3-D printed biodegradable scaffold for bone regeneration. The success of such a scaffold will allow surgeons to custom-fabricate scaffolding for maxillofacial and orthopedic applications. **3rd place award winner in the 2019 AAO Charley Schultz Resident Research Competition**
- Identifying genetic factors which drive skeletal Class II and Class III malocclusion growth patterns in families, and understand how facial shape and inherited genetic factors play a role in the success of early growth modification. This study is being conducted in collaboration with other investigators from Colombia, Italy and Brazil.
- Determining the prevalence of plaque accumulation and white spot lesions (WSL) in orthodontic patients at various time intervals throughout treatment using the plaque index and visual examination. This study is part of the larger College study designed to better understand the development of WSLs and how better to prevent them.

- Gaining a better understanding of the genetic variation(s) that are associated with dental agenesis (DA) within families and in a case/control study format, and exploring connections between (DA) and cancer development later in life. This particular study is being conducted in collaboration with the University of Texas Health Sciences in Houston.
- Three-dimensional facial imaging for syndrome diagnosis; and/or orthodontic and orthognathic surgery diagnosis, treatment planning and outcome assessment.
- Investigating a possible correlation between physical activity and reported intensity of pain resulting from the placement of orthodontic separators. Though some level of pain is nearly a universal experience with orthodontic treatment, intensity and duration of pain varies significantly among patients.
- Utilizing CBCT imaging to compare unilateral cleft lip and palate patients to controls in the prevalence of asymmetries, timing of fusion of the spheno-occipital synchondrosis and differences in cranial base angle.
- Developing a panel of genetic markers that can aid in predicting an individual's relative risk for developing one or more chronic inflammatory disease in his/her lifetime (using the genetic material of individuals diagnosed with periodontal disease, diabetes and/or Alzheimer's Disease).
- Determining the reliability of Moyers and Tanaka-Johnston space analyses in Hispanic-Americans. If they are found to be significantly inaccurate, new regression equations will be studied in order to discover a space analysis that is ethnically sensitive to Hispanic population.

Finally, we would not be complete as a graduate program of any substance without the All-Star assembly of part time faculty who provide a high-energy, high-quality and high-commitment clinical education, year-in and year-out to our graduate students. Those highly valued individuals are **Drs. Bruce Haskell** (Louisville), **Judson Knight** (Lexington), **Bob Rust** (Edgewood), **Jim Thacker** (Cincinnati) and **Philip Wahle** (Lexington).

Respectfully submitted by:
 G. Thomas Kluemper, DMD, MS
 Professor and Chief
 Division of Orthodontics
 University of Kentucky