

UF COLLEGE OF DENTISTRY OFFICE OF RESEARCH FALL/WINTER 2023 NEWSLETTER

1st Year DMD Students Represent UFCD at the 2023 Hinman Symposium

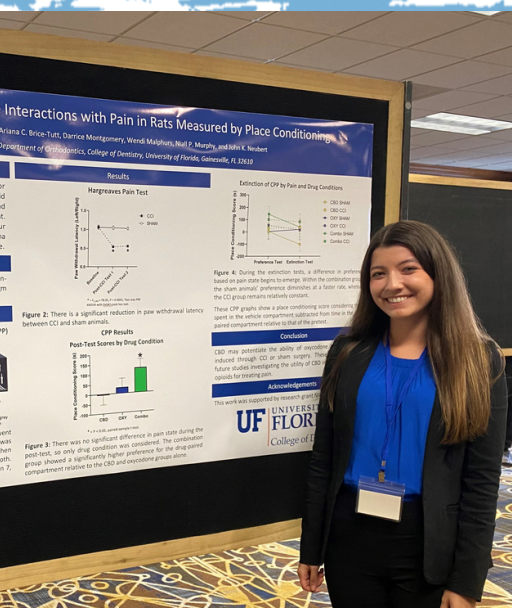
Natasha Patel, a first-year dental student mentored by Dr. Shannon Wallet, took top honors at the 28th Annual Hinman Student Research Symposium in Memphis, Tennessee. Her presentation, "Oral Keratinocyte Extracellular Vesicles Immunomodulate Periodontal Ligament Fibroblasts," earned her the title of Most Outstanding Presentation in the Basic Sciences.



Alyssa Gamboa, a fellow first-year dental student mentored by Drs. John K Neubert and Niall Murphy, presented a poster on "Cannabidiol-Oxycodone Interaction with Pain in Rats Measured by Place Conditioning." Selected by UFCD faculty, Patel and Gamboa represented the college at the Hinman Symposium.

For more information about the 1st year dental students representing UFCD at the 2023 Hinman

[Click Here!](#)



Graduate students Receive NIH/NIDCR F31 Fellowship Awards



Zavier Eure

Zavier Eure is a 5th-year PhD candidate who joined the Biomedical Sciences Program (BMS) in 2019. In 2020, he joined his mentor, Dr. Frank Gibson's lab in the Department of Oral Biology. He received his B.S. in Laboratory Animal Sciences from the North Carolina Agriculture and Technical State University, where he studied the impact of how the inhalation of microbes found in dust from swine facilities contribute to respiratory diseases found in indoor reared swine. Upon graduation, his research interests were understanding host-pathogen interactions and Immunology.

During his time in the BMS program, he developed a great love for maintaining eukaryotic and bacterial cell cultures and learned different techniques to monitor changes in host cellular physiology.

In August, Zavier received a two-year F31 award entitled "Defining the role of sphingolipids of *Porphyromonas gingivalis* outer membrane vesicle uptake and elicited inflammation" from the National Institutes of Health, National Institute of Dental and Craniofacial Research. His research encompasses investigating the impact of sphingolipid synthesis on *Porphyromonas gingivalis* (Pg) outer membrane vesicle uptake and host immunomodulation, where he hopes to understand the role Pg sphingolipids have in Pg pathogenesis and how sphingolipids contribute to Pg being an oral pathobiont.

Once he completes his PhD, he hopes to pursue research in immunology and cellular biology to utilize his skills in drug development and disease prevention.



Alexandra Peterson is a 5th year PhD candidate in the BMS program under the mentorship of Dr. José Lemos in the Department of Oral Biology. She received a B.S. in Biochemistry, with a minor in Writing and Rhetoric, from Stony Brook University in 2019. While completing her B.S. she was involved in metabolomics and innate immunology research. Since coming to UF her PhD work thus far focuses on dental caries, specifically investigating the unique zinc export mechanism by which *Streptococcus mutans* survives toxic levels of zinc.



Alexandra Peterson

In August, she received a F31 award entitled, "Determination of structure-function relationships and role in virulence of a MerR-type regulator that mediates zinc tolerance in *Streptococcus mutans*." Her F31 research continues to focus on dental caries, exploring the protein ZccR's structure and role in virulence in the hopes of enabling the development of a *S. mutans*-specific treatment that can work synergistically with zinc.



Congratulations

to our Multi-Million-Dollar NIH Award Recipients



Multi-PIs Dr. Margaret Dasilva and Dr. Roger Fillingim received a \$3,322,546 five-year NIH/NIDCR UH3 award entitled "Photobiomodulation for Temporomandibular Disorder Pain." They aim to scrutinize the efficacy of laser and LED light therapy for those grappling with painful Temporomandibular Disorders (TMDs). [Continue reading here!](#)



Dr. José Lemos received a \$2,257,662 NIH/NIDCR R01 entitled, "Mechanisms of metal ion homeostasis or oral Streptococci." The research investigates molecular factors that mediate virulence in the opportunistic Gram-positive pathogens such as the dental pathogen *Streptococcus mutans* and the nosocomial (hospital-associated) and endodontic pathogen *Enterococcus faecalis*.

Dr. Emily Bartley received a \$2,996,203 NIH/NIAMS R01 entitled, "A multisystem resilience approach in the assessment of postsurgical pain trajectories." This award focuses on examining how resilience mechanisms can improve recovery after knee and hip replacement surgeries, with the goal to understand what makes people get back to functioning normally.



[Read more about Drs. Lemos, Bartley, and Cha's R01s here](#)



Multi-Million-Dollar NIH Award Recipients continued



Dr. Seunghee Cha received a \$2,980,684 NIH/NIDCR R01 entitled, "PRK sensing of mitochondrial dsRNA in childhood Sjogrens disease." This research investigates the pathogenesis of autoimmune Sjögren's disease (SjD) that typically affects the exocrine glands of elderly females, resulting in severe dry mouth and dry eyes.



Dr. Daniel W. McNeil in Community Dentistry and Behavioral Science and M-PI Dr. David W. Paquette of Eastern Carolina University School of Dentistry received a \$3,692,175 NIH/NIDCR U01 entitled, "Development of Opportunities for Research (DOOR) in Dental Schools: Future Academic Interdisciplinary Workforce and Collaborators for the National Dental Practice-Based Research Network (PBRN)."
[Continue reading...](#)

Recent UFCD Seed Grant Awardees

Dr. Kaylie Lam (mentor Dr. José Lemos) in the Department of Oral Biology received a \$5,000 UFCD Post-Doc Seed Grant entitled, "Interspecies interactions between *Enterococcus faecalis* and lactobacilli in the female genitourinary tract."

Adrienne Kramer an orthodontic resident (mentor Dr. Sarah Abu Arqub) received a \$2,500 student seed grant for her research project entitled "Prediction of location and severity of impacted maxillary teeth- Artificial Intelligence algorithm using Panoramic Radiographs."

Alexandra Brown an orthodontic resident (mentor Dr. Sarah Abu Arqub) received a \$2,500 student seed grant for her research project entitled, "A randomized clinical trial to assess the efficacy of reducing the aligners' wear protocol."

Vanessa Schussler an operative dental resident (mentor Dr. Ana Dias Ribeiro) received a \$2,861.77 student seed grant for her research project entitled, "Evaluation of color science education on shade selection performance among dental providers."

Dr. Zsolt Toth in the Department of Oral Biology received a \$20,000 faculty seed grant for his project entitled "Regulation of KSHV infection through protein degradation."



New Faculty Spotlight



Tumader Khouja, BDS, MPH, PhD



Dr. Tumader Khouja was hired as a Clinical Assistant Professor in the Department of Community Dentistry and Behavioral Sciences.

Before joining UF, Dr. Khouja was a postdoctoral associate in the Division of General Internal Medicine, Dept of Medicine, University of Pittsburgh School of Medicine. During her postdoc, Dr. Khouja's research used big datasets to evaluate opioid prescribing and its consequences in dentistry as well as opioid prescribing in health systems and antibiotic prescribing globally.

Dr. Khouja received her degree in dentistry from King Abdul Aziz University, Jeddah, Saudi Arabia. She completed a master's in public health with a Health System Leadership certificate and Management from the University of Pittsburgh Graduate School of Public Health. She then received her PhD in Health Services Research and Policy from Pitt.

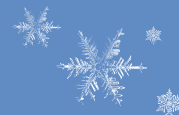
Her research has been supported by federal and non-federal funding, including the inaugural Challenges in Managing and Preventing Pain seed award. She also served as the Chair of Career Development for the University of Pittsburgh Postdoctoral Association. Additionally, she was a Mentee of the American Association of Dental, Oral and Craniofacial Research Mentoring an Inclusive Network for a Diverse Workforce of the Future (AADOCR "MIND" the Future) 2022-2023 cohort.

Dr. Khouja received a K99/R00 dual dentist scientist pathway to independence award from NIDCR. In her K99/R00 project she uses quantitative and qualitative methods to understand barriers and facilitators to non-traumatic dental condition (NTDC) management in the emergency department (ED). She aims to create an ED provider centered intervention to improve prescribing for NTDC.

She has 3 children and a cat, and outside of work she enjoys cake decorating and spending time with family.

Welcome to UFCD!

Announcements



DMD Travel Award Recipients

Fourth-year dental students, Brennan Ertl, Raafi Zaman, and Miles Turner are the recipients of the DMD Research Conference Travel Award. This award, sponsored by the Office of Research, provided a valuable opportunity for them to showcase their research at the Academy of Dental Materials held in San Diego, CA in October. The DMD Research Conference Travel Award program offers recipients financial assistance of up to \$2,000 for travel expenses to present their research at national meetings. [Leare more](#) about the travel program.

AS A REMINDER, UFCD UPDATED ITS PROPOSAL DEADLINES. ALL MATERIALS FOR PROPOSALS ARE NOW DUE BY 9 AM FIVE BUSINESS DAYS PRIOR TO THE AGENCY'S DEADLINE.

PROPOSAL SUBMISSION DEADLINES

NIH Grant Type	Upcoming UFCD Internal Deadlines
New - R01	January 29, 2024
New - K series	February 5, 2024
New - R21, R03	February 9, 2024
Renewal, Resubmission - R01	February 27, 2024
Renewal, Resubmission - K series	March 5, 2024
Renewal, Resubmission - R21,R03	March 11, 2024
New, Renewal, Resubmission - F Series Fellowships	April 1, 2024