



UF College of Dentistry, Office of Research *Spring 2023 Newsletter*

Announcements

Congratulation to 2023 AADOCR Bloc Travel Grant Winner

Eight students of the 2022 Summer Research Program submitted abstracts to present at the annual AADOCR conference and all eight were accepted. Of the eight, Thomas Koby-Hersky won the 2023 AADOCR Bloc Travel Grant to support his travel to the conference to take place in March in Portland, Oregon. He will receive \$1,000 to assist in paying for hotel and round-trip airfare to the meeting.



Heba El-Ahmad Elected as Secretary of the NSRG Board

Heba El-Ahmad, a DMD/PhD student was just elected as the Secretary for the 2024-2025 NATIONAL Student Research Group, also known as NSRG. She will be representing dental students nationally who are currently engaged in dental research or interested in pursuing future research careers, a critical role in the Association and the dental research community.



2023 Emerging Scholars Student for UF College of Dentistry

The Center of Undergraduate Research officially accepted Mallori Watson under the mentorship of Dr. Mateus Rocha in the Department of Restorative Dental Sciences, Dental Biomaterials. The Emerging Scholars Program encourages early undergraduate students interested in adding a research experience to their curriculum at the freshman or sophomore year to apply for this entry-level program.

DSP provides further guidance after Dr. David Norton's announcement of the New On-line Tools allowing UF Researchers to promptly receive approval for certain types of research without traditional IRB review

With the IRB announcement of the non-human web-based determination tool, UF Research provided the following guidance for non-human studies in UFIRST. PI's or those with first-hand knowledge of the human work are responsible for identifying the appropriate answers to the UFIRST Proposal SmartForms. If the work is determined by the IRB tool to be non-human, users should attach the determination from the IRB tool to the UFIRST internal documents on their proposal, and then indicate the appropriate responses on the Human Subjects Page in the UFIRST Proposal SmartForms.

These tools ask simple yes/no questions based on regulatory requirements. If the activity the researcher wants to engage in fits regulatory requirements, the tool will promptly send an email to the researcher(s) indicating that their research may proceed without having to submit anything else to the IRB. If the submission does not fit these requirements, the tool will instruct the researcher on next steps. The on-line tools are available for use by researchers at [this link](#).

DMD Students Awarded a UF Luby Microgrant

The Gatorguard team is composed of four dedicated DMD students: Miles Turner (CEO), Raafi Zaman (COO), Brennan Erl (CFO), and Thomas Koby (CSO). These talented individuals have worked together to develop a unique business idea: a 3D-printed high-performance sports mouthguard. We are excited to announce that the GatorGuard team has won the UF Luby Microgrant! This is a major accomplishment for the team, which has worked hard to develop their business idea and pitch it to a panel of judges. The UF Luby Microgrant will provide the GatorGuard team with the funding they need to bring their innovative product to market.

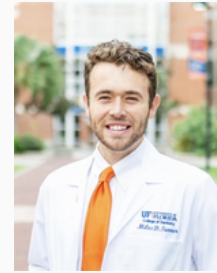
The Gatorguard mouthguard is the first of its kind to be 3D printed using Digital Light Processing (DLP) technology, which allows for a level of design accuracy down to 25 micrometers. This means that the mouthguards are tailored specifically to the unique shape of an athlete's teeth for a perfect fit. In addition to its advanced design, the Gatorguard mouthguard also features a unique internal lattice structure that absorbs and dissipates energy across the entire mouthguard surface. This allows for greater protection using less material when compared to even custom mouthguards made by a dentist. The Gatorguard team has been fortunate to have the support and guidance of three experienced mentors: Dr. Mateus Rocha, Dr. Dayane Oliveira, and Dr. Steve Howard. These mentors have helped the team develop their business idea and navigate the challenges of bringing a new product to market.

Dr. Rocha says about his experience mentoring the DMD students:

"Mentoring the GatorGuard team has been a truly rewarding experience. From the very beginning, it was clear that Miles, Raafi, Brennan, and Thomas were a talented and dedicated group of students with a passion for innovation and a desire to make a positive impact in the field of dental health. As their mentor, it was a pleasure to see the team develop their business idea and bring it to fruition. Their idea for a custom high-performance mouthguard was truly innovative, and their hard work and dedication is being recognized. Throughout the mentorship process, I was impressed by the team's ability to work together, overcome challenges, and learn from their experiences. It was a pleasure to watch them grow and develop as individuals and as a team, and I have no doubt that they will continue to make a positive impact in the world of sports and dental health."

For me, Research is one of the most important aspects of the DMD curriculum, as it allows students to gain a deeper understanding of the field and to contribute to the development of new treatments and technologies. For the GatorGuard team, research was a key component of their project, as they worked using evidence-based dentistry to develop a new technology. This learning experience extends beyond the classroom, as it can have a real impact in the world of dentistry. For the GatorGuard team, the opportunity to see their research ideas become a real product is a rewarding and exciting experience. I would like to thank Drs. Oliveira and Howard for their contribution in this project."

One of the key resources that helped the GatorGuard team in their research was the Center for Dental Biomaterials. This center provides students with access to advanced research facilities and equipment, as



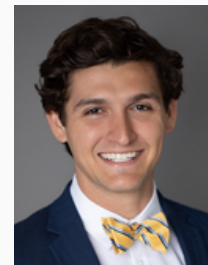
Miles Turner,
CEO



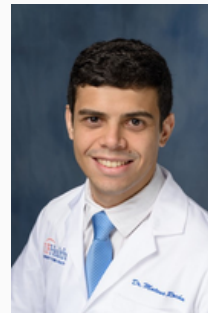
Raafi Zaman,
COO



Brennan Ertl,
CFO



Thomas Koby,
CSO



**Dr. Mateus
Rocha, Project
Mentor**

well as the expertise of faculty members who are leaders in their fields. By using the resources at the Center for Dental Biomaterials, the GatorGuard team was able to develop their mouthguard using an evidence-based approach and test it in labs at the University of Florida College of Dentistry.

The University of Florida is known for its strong focus on translational research, which involves taking research from the laboratory and translating it into practical applications and real-world solutions. This focus on translational research made UF a leader in the field of dentistry and has allowed students like those on the GatorGuard team to make a positive impact in their field.

Dr. Daniel McNeil Receives \$652,742 From NIDCR for his MPI UG3 Proposal

Dr. Daniel McNeil (lead PI), professor and chair of the Department of Community Dentistry and Behavioral Sciences, and his spouse Dr. Cheryl McNeil, a UF Department of Psychiatry research professor, received a 2-year MPI UG3, which could lead to a 5-year UH3. Their National Institutes of Dental and Craniofacial Research grant, "Implementing Evidence-based Behavioral Skills in Pediatric Oral Health care Provider" is a multi-site research study involving three other institutions, the University of North Carolina Chapel Hill, the University of Arkansas, and West Virginia University.



Daniel McNeil

His spouse Cheryl is a clinical child psychologist and an internationally-recognized scientist-clinician who has written several books about Parent-Child Interaction Therapy (PCIT). Together, they are bringing PCIT methods into Dentistry. Their research tests the efficacy and implementation of a training program for dentists, dental hygienists, and dental assistants to learn and utilize unique skills to interact with child dental patients and their parents/caregivers. In the overall UG3/UH3 project, they will be providing training to over 60 dental practices and clinics across four states. They will also be providing CE as part of this training. The intent is to train all providers in a particular practice or clinic to work in tandem with one another in utilizing these special skills with children.

The interactive training includes hands-on practice and feedback in implementing skills such as labeled praises, behavioral descriptions, and direct commands with follow-up positive social reinforcement. This work focuses on the "triadic interactions" of three people, the dentist, the child patient, and the parent/caregiver.

They hope to identify the best training methods for dentists, hygienists, and dental assistants to learn and utilize the unique skills needed to work with our youngest patients. Guidelines from AAPD and other organizations indicate that children should be seen for dental care by age one or earlier at the first tooth's emergence. They refer to this training approach as Dental-Child Interaction Training (DCIT). DCIT skills can enable oral healthcare providers to work effectively with young children, their parents, and caregivers. It also can reduce the stress that dentists sometimes experience in working with young children and trying to manage their behavior. Most children are seen for dental care by general dentists and hygienists, not pediatric dentists (as there are not enough of them). Therefore, we must give general dentists and hygienists the necessary skills to work positively and productively with young children and their parents/caregivers.

New Faculty Spotlight

Lin Zeng, Ph.D., was hired through a national search by the Department of Oral Biology as an Associate Professor beginning February 1, 2023. As an internal candidate, he has worked in Oral Biology since 2004, starting as a postdoc trainee (working with Dr. Robert Burne) and then as a research faculty (assistant and associate ranks). Lin will primarily engage in research activities, mentoring graduate students and other trainees, and will use his expertise in microbiology to teach dental students, residents, and graduate students. Dr. Zeng has emphasized that “we are fortunate to have been able to retain Dr. Zeng through this national search. Lin’s expertise in oral microbiology and microbial metabolism will be a huge asset to the department in serving both the research and education missions of the College of Dentistry.”



Lin Zeng

Lin was born and raised in South China, Sichuan Province, and received his Bachelor’s (1995) and Master’s (1998) degrees from Nankai University, in the port city of Tianjin in Northern China, for both in Microbiology. He later moved to the United States, receiving his Ph.D. in 2004 from the University of Florida, Molecular Genetics and Microbiology Department working on *Pseudomonas aeruginosa* pathogenesis.

His main research interest in the lab is oral bacteriology research to understand molecular mechanisms contributing to dental caries and those that may boost microbial homeostasis and oral health. His primary focus has been carbohydrate metabolism in the aspects of genetics, biochemistry, and ecology. Lately, his research interest includes metabolites generated during sugar consumption or in conditions such as diabetes. As a result of these activities, he is collaborating with other members of the UFCD faculty (and other units on campus) to develop prebiotic/probiotic approaches of research models and potential therapeutics to control oral diseases such as caries and peri-implantitis.

Lin speaks fluent Mandarin Chinese and enjoys a bowl of well-crafted ramen and an international game of soccer. He loves spending time with his two teenage children. He is particularly excited about his new position here at the college, where he will have the opportunity to open his lab and office to young and inquisitive minds.

Congratulations!

New Addition to the Office of Research

Ryan Roberts recently joined the Office of Research as a Researchers Administrator I. Ryan came to us from the UF Institute of Food and Agricultural Sciences. He has been a part of UF for 7 years and recently graduated from Santa Fe College, completing his B.S. in Human Resources. He will serve as the Research Administrator for the Department of Community Dentistry and Behavioral Sciences. When not at work, you can find him spending time with his wife and two children or playing golf at one of the local courses.



Ryan Roberts

Welcome to the team!

Reminders and Upcoming Deadlines

Call For 2023 Summer Research Program Mentors

The summer research program begins on Monday, May 22, and ends on Friday, July 28. Participants must complete a 10-week program, committing 40 hours per week. Mentors will be responsible for providing students with a research project to cover this time. If you are interested in mentoring, please email [Denise Webb](#) by Friday, March 10, 2023.



As a reminder, UFCD updated its proposal deadlines. All materials for proposals are now due by 9 AM three days prior to the agency's deadline.

PROPOSAL SUBMISSION DEADLINES

NIH Grant Type	Upcoming UFCD Internal Deadlines
New R01	June 1, 2023
New R21, R03	June 13, 2023
Renewal, Resubmission - R01	March 1 & June 29, 2023
Renewal, Resubmission R21/R03	March 13 & July 12, 2023

SPRING SYNERGY RESEARCH DAY *Presentations*

MARCH 31, 2023 | HPNP BUILDING

ROBERT L. KAPLAN SCHOLAR



*Occlusion in Everyday
Dentistry*

DR. LEE ANN BRADY

Director of Education,
The Pankey Institute

Owner, Desert Sun Smiles Dental Care

RESEARCH KEYNOTE



*Understanding Pain and Aging
Interactions Using Artificial Intelligence*

DR. YENISEL CRUZ-ALMEIDA

Associate Director, Pain Research &
Intervention Center of Excellence

Associate Professor, UFCD



Call for Abstracts

The UF College of Dentistry Office of Research is currently accepting abstract submissions for poster presentations at the college's annual Research Day on March 31.

We welcome poster presentations from undergraduate/pre-dental students, current DMD students, master's degree candidates and residents, Ph.D. students, postdocs, faculty and staff.

POSTER PRESENTATION AREAS:

- ▶ Educational Research
- ▶ Clinical Research
- ▶ Basic Research

**ABSTRACT DEADLINE:
MARCH 17**

BROUGHT TO YOU BY:

Office of Research
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