



University of Florida College of Dentistry

# Strategic Plan 2019-2024

**UF** | UNIVERSITY of  
FLORIDA



## From the Dean

The University of Florida College of Dentistry (UFCD) is a leader in education, clinical care and research. We are proud to be a pillar of the local Gainesville community and a leader in these three areas — regionally, nationally and globally. We are also unique: UFCD is one of only three U.S. dental schools with residency training in every dental specialty recognized by the American Dental Association.

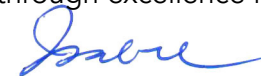
As the only publicly funded dental school in the state, UFCD has a strong tradition of comprehensive and compassionate service to the community. We have a multi-faceted service mission encompassing patient care, community outreach and education. We remain committed to providing excellent care to individuals across their lifespan — translating discoveries and the best science into practice.

People are our strength! Collectively, our students and residents benefit from the skills and experience of our devoted faculty and staff working in a rich, collaborative environment afforded by being one of the six health colleges at the UF Academic Health Center in Gainesville. As we focus on developing exceptional dentists, specialists and researchers, we are mindful that academic excellence must be paired with compassion, integrity and professionalism — and that our future depends on producing not only future clinicians, but also leaders in academia and in the community.

As we plan for the future, we strive to be mission-focused while capitalizing on key opportunities. The UFCD Strategic Plan for 2019-2024 embraces the integrated nature of modern dentistry, oral health and overall health — underscoring essential support for research that informs and transforms patient care. The plan centers on five key goals:

- ▶ Develop and sustain a learner-centered educational environment.
- ▶ Provide excellent, patient-centered health care grounded in evidence.
- ▶ Support and advance preeminent basic, clinical, translational and population-based research.
- ▶ Upgrade and expand teaching, research and clinical care facilities and infrastructure.
- ▶ Enhance and maintain a supportive and humanistic environment.

I welcome your continued input as we strive to advance oral health through excellence in education, research and service.



A. Isabel Garcia, D.D.S., M.P.H.  
Dean, University of Florida College of Dentistry





# **The University of Florida**

## **For the Gator Good**



Founded in 1905, the University of Florida is a land, sea and space grant university that has been entrusted to educate, research and serve. UF has a 2,000-acre campus and more than 900 buildings with locations in all 67 Florida counties.

UF has some of the top faculty in the country and attracts over \$700 million in research each year and fosters a uniquely collaborative environment that transforms potential into actual results.

# **University of Florida Health**

## **Committed to Excellence**



University of Florida Health is the Southeast's most comprehensive academic health center and encompasses hospitals, faculty practices, colleges, centers, institutes, programs and services.

UF Health represents the shared vision and commitment to patient care excellence of the employees of the UF Academic Health Center and UF Health Shands health care system. It includes the colleges of dentistry, medicine, nursing, pharmacy, public health and health professions, and veterinary medicine, nine research institutes and centers, and an academic campus in Jacksonville.



# University of Florida **College of Dentistry**

## **Education   Research   Patient Care**



### **Mission**

Provide innovative dental education and deliver the highest degree of patient-centered care and service, while promoting discovery and the generation of knowledge through research, with strong commitments to community engagement, diversity and inclusion.

### **Vision**

To be a global leader in dental education, research, patient care and service.

### **Values**

We value excellence through high-quality comprehensive dental care, cutting-edge research and learner-focused education. We support a culture of dignity, respect, support and compassion fostered through a diverse and inclusive environment.

### **UFCD Strategic Plan 2019-2024**

This strategic plan articulates five goals that promote excellent dental education; compassionate, patient-centered care; innovative basic, translational and clinical research; strategic and efficient operations; and an inclusive and supportive environment.

These goals, which are highly integrated, will guide UFCD's decision-making for the next five years toward achieving global eminence in dentistry and oral health.

From humble beginnings in a trailer on the UF campus, the UF College of Dentistry has grown into a nationally recognized program of excellence in oral health education, research and patient care.



Since 1972, the University of Florida College of Dentistry has educated nearly 4,500 dental students, residents and fellows — preparing them to provide comprehensive and specialty care to patients as well as to serve as leaders in their communities and within academia. Our college's faculty members are not only educators and clinicians, but also leaders in developing knowledge that guides teaching and clinical care. Currently we are ranked fifth among U.S. dental schools receiving grant support from the National Institutes of Health (NIH)/National Institute of Dental and Craniofacial Research (NIDCR). Our research environment provides opportunities for students to participate in the thrill of discovery and to learn first-hand how evidence guides care.

Our dental centers in Gainesville, Hialeah, St. Petersburg and Naples completed 148,539 patient visits during fiscal year 2017, offering the highest quality comprehensive care to children and adults. We have a multi-faceted service mission encompassing patient care and community outreach and education. Through the UF Statewide Network for Community Oral Health, we improve access

to dental care for Florida's residents, focusing on vulnerable populations and patients with special health care needs. Our students, residents and faculty also provide free dental treatment to underserved populations during educational service projects at home and abroad.

Our location on the west side of the UF Academic Health Center campus allows meaningful interdisciplinary interactions among the six UF health colleges. Drawing from the strengths of the UF Academic Health Center, we provide a full array of top-rated educational opportunities, ranging from predoctoral education to graduate, specialty and certificate programs, including a DMD/PhD program in biomedical science with a focus on oral biology. UFCD educates future dentists and dental specialists through 16 degree and certificate programs. Within the UF Health environment, students and residents are in close proximity to providers in other health professions, which enriches interdisciplinary clinical learning toward patient-centered care.



# Strategic Plan 2019-2024

## Quick reference



### Education

Develop and Sustain a Learner-Centered Educational Environment

Excellent education, guided by and grounded in sound scientific evidence, develops students for success as skilled professionals and effective leaders.

Our students, residents and faculty participate in interdisciplinary learning and research that benefits the college and its community of patients, and is guided by well-rounded curricula that produces professionals skillful in the art and science of dentistry. We will employ innovative, evidence-based educational models to prepare our students and residents for success and continued effectiveness in a rapidly changing health care environment.



### Patient Care

Provide Excellent, Patient-Centered Oral Health Care Grounded in Evidence

The highest quality oral health care is evidence-based and patient-centered, meeting the needs of our highly diverse community of patients.

UFCD has a longstanding reputation as the primary source for top-quality, affordable oral health services to residents of Gainesville and surrounding areas, as well as in other Florida communities via our community-based dental centers. As a premier U.S. dental school with residency training in every specialty recognized by the American Dental Association, UFCD will strive to become a top destination for advanced or specialty care in all aspects of oral health care.



### Infrastructure

Upgrade and Expand Teaching, Research and Clinical Care Facilities and Infrastructure

Centralized and efficient management of UFCD operations and development best supports our ability to be an outstanding institution.

UFCD's outstanding students, faculty and staff make up the core of our excellence as an institution. Yet to stay at the leading edge of teaching, research and care, we must invest strategically in infrastructure improvements. These efforts will pay off in improved patient care and safety, stronger research and educational programs, and an expanded pool of patients.



### Research

Support & Advance Preeminent Basic, Clinical, Translational and Population-Based Research

A vibrant research enterprise maintains the spirit of discovery that brings to life intellectual curiosity and enhances clinical acumen afforded through scholarship.

A strong research portfolio is a hallmark of UFCD's accomplishments, reputation and success. A thriving research environment ensures that students, residents and faculty remain at the leading edge of biomedical knowledge and practice. Through research, we assure that patient-care is optimally effective.



### Environment

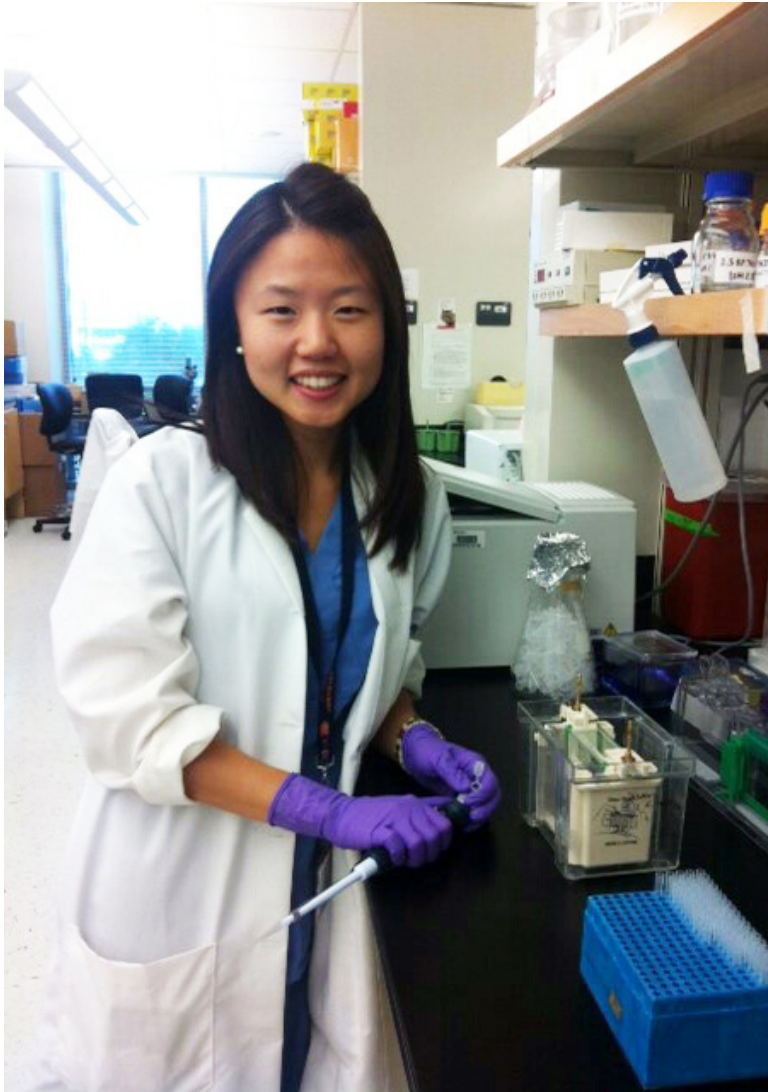
Enhance and Maintain a Supportive and Humanistic Environment

UFCD is a premier destination for dental patients, a top educational choice for students and residents, and a stimulating working environment for faculty and staff.

An organization can only be strong when its human capital is united. Students, faculty and staff at UFCD form a special community linked through interests, knowledge, science, curiosity and compassion. We will create an inclusive, supportive and respectful climate that embraces and values diversity — acknowledging that with diversity, we gain a broader foundation of strength, wisdom and creativity. We will foster an environment of support, trust, effective communication, responsible and ethical behavior, and maintain an ongoing commitment to respect within our own institution while we provide care for others.



Dual-Degree Student Keeps Research Alive



UFCD D.M.D./Ph.D. student KyuLim Lee is one example of why the future of dentistry is so bright. Lee arrived at UFCD in 2013 with a broad interest in oral health, sparked by her undergraduate degree in food science and human nutrition from the UF College of Agricultural and Life Sciences with an emphasis on nutritional sciences.

Lee knows that although scientific discovery takes time and diligence, it is highly worthwhile. “My experience has taught me an important aspect of research: a cure for a disease is not discovered overnight. The discoveries result from years of incremental research,” she said.

After winning first place in the 2014 American Association for Dental Research Unilever Hatton Competition, she advanced to the International Association for Dental Research’s version later the same year, winning second place in the global contest. And in a first for UFCD, Lee was selected as the 2016-2017 Gert Quigley Fellow, giving her the opportunity to spend six weeks at the American Association for Dental Research, or AADR, headquarters as well as a yearlong appointment to the AADR Government Affairs Committee.

Rather than consider the opportunity a dry role, Lee saw the position as critical to advancing academic dentistry through policy and engagement with funding agencies. As a full voting member of the committee, Lee and other fellows helped to craft policy as it relates to the federal budget and other legislative and regulatory activities important to dental research.

“Research is the future of dentistry and advocating the importance of continuous funding for dental research is very important,” she said.

“Research is the future of dentistry and advocating the importance of continuous funding for dental research is very important,” Lee said.

Our Vision

Excellent education, guided by and grounded in sound scientific evidence, develops students for success as skilled professionals and effective leaders.

Our students, residents and faculty participate in interdisciplinary learning and research that benefits the college and its community of patients, and is guided by well-rounded curricula that produces professionals skillful in the art and science of dentistry. We will employ innovative, evidence-based educational models to prepare our students and residents for success and continued effectiveness in a rapidly changing health care environment.

Objectives

1-1 Systematically review and revise the curriculum across DMD and other programs to promote excellence and serve as a model for innovative dental education.

Incorporating the results of pilot tests, dental-education literature and best practices, implement a streamlined, contemporary curriculum in the DMD and advanced dental education programs in a learner-centered, humanistic environment.

Implementation Strategies

- ▶ Eliminate redundancy in the curriculum to allow time for expanded learning opportunities in additional areas such as research, public health and emerging technologies.
- ▶ Expand blended learning approaches, case-based learning, evidence-based practice and active learning throughout the curriculum.
- ▶ Expand integration of biomedical, clinical and behavioral sciences in the curriculum.
- ▶ Continue to identify and assess further curricular opportunities such as increased formative assessments that support student-centered learning, community-based learning and interprofessional education.

1-2 Transition the UFCD curriculum toward a whole-patient care model.

Increasing curricular focus on comprehensive and coordinated patient care while supporting mastery of individual procedures offers significant opportunities for improved student learning and better patient care. Curricular reforms will better integrate basic and clinical science, support critical

thinking, provide earlier clinical experiences, and optimize the impact of biomedical advances through faster translation of research findings into clinical care.

Implementation Strategies

- ▶ Explore centralized curriculum-management strategies in ways that will better integrate curricular content, increase efficiency and facilitate transdisciplinary patient-centered care.
- ▶ Incorporate additional experiential, case-based and small-group learning relevant to various patient populations, especially children, seniors and those with diverse needs and backgrounds.
- ▶ Adopt and support measures of effectiveness that include oral-health-related quality of life and patient outcomes.

1-3 Expand coordinated and meaningful interprofessional educational experiences.

Providing patient care in a collaborative, integrated team environment is the hallmark of interprofessional education, and it ensures that UFCD students and residents acquire knowledge and skills to work within this modern landscape. The expected results are improved health outcomes coupled with the best available care supported by evidence. This shift is especially important given the aging of the U.S. population and a growing need to treat a broad range of patients diverse in age, medical risk and cultural background.

Implementation Strategies

- ▶ Increase the number of collaborations and learning opportunities between UFCD and other UF health disciplines.



**Goal One**    Develop and Sustain a Learner-Centered Educational Environment

- ▶ Maximize the use of technology to forge connections between UFCD students, residents and staff, as well as with other health professionals.
- ▶ Recruit a broad range of health care professionals outside of dentistry to participate with trainees and faculty in UFCD clinics.
- ▶ Promote earlier DMD student participation in clinical care.
- ▶ Streamline the referral process for care and strengthen the quality improvement process for monitoring interdisciplinary care.
- ▶ Evaluate workforce models of team approaches to patient-centered care.

**1-4**    Incorporate technology to provide students and residents with broader learning experiences.

Advances in educational technology have the potential to expand curricular flexibility and to customize instruction for individual learning styles. Online courses, apps, simulation and other approaches can be used to enhance learning as well as ensure that trainees are comfortable with the use of new technologies in care and in research.

**Implementation Strategies**

- ▶ Analyze current curricula to identify potential areas amenable to online instruction, including pre-clinical coursework, using virtual patients, and enabling more digital imaging across all care centers and graduate programs.
- ▶ Expand UFCD online learning opportunities for existing and prospective students, community locations, dental professionals and auxiliaries.
- ▶ Make existing resources accessible for research use, including migrating axiUm, EPIC and other systems to searchable databases.
- ▶ Consider use of various technologies to enhance education and point-of-care service.

**1-5**    Enhance the integration of research into predoctoral and graduate educational programming.

New insights and knowledge from research inform what we teach and how we provide care. UFCD currently ranks fifth among U.S. dental schools for NIH funding and has ranked in the top 10 for the past 15 years. Amid the rich research environment provided throughout the UF Academic Health Center, UFCD trainees and faculty have access to cutting-edge technologies and interdisciplinary collaborations that can revolutionize prevention and management of oral diseases. These strengths position us as a world leader in oral health research.

**Implementation Strategies**

- ▶ Develop a process for students to engage in research activities across all four years of the DMD curriculum.
- ▶ Expand UFCD faculty representation and active engagement with the UF Graduate Program in Biomedical Sciences.
- ▶ Continue to support and enhance a system for effective and timely communication regarding ongoing research interests and activities of faculty and trainees, both within and beyond the UFCD in-house research community.
- ▶ Involve research faculty and trainees in curricular revisions to allow greater flexibility for students to pursue dental and educational research.
- ▶ Require evidence-based approaches in all clinical teaching.
- ▶ Employ axiUm and other data-science approaches to facilitate longitudinal cohort studies and health-data mining for quality assurance.

**Goal One**    Develop and Sustain a Learner-Centered Educational Environment



UF Health is unusually suited to creating valuable interprofessional opportunities for its students since all six health colleges are co-located on the Gainesville campus.

**Physical Therapy Meets Dentistry in Interprofessional Education**

The value of interprofessional research and education is at an all-time high in today’s academic climate. Yet, logistical challenges—such as meeting curricular and scheduling requirements—can make it difficult to achieve in the real world.

UF Health is unusually suited to creating valuable interprofessional opportunities for its students since all six health colleges are co-located on the Gainesville campus. In addition, all of the major research centers, institutes and most clinical enterprises are located within a half-mile radius of one another, and are adjacent to the main UF campus.

The relatively new “Making Safe Moves” course is a great example of an interprofessional offering that is a win-win opportunity for UF dental and physical therapy students. Making Safe Moves is an interactive, practical, peer-learning curriculum in which physical therapy students teach dental students how to safely transfer patients with assistive devices into and out of a dental chair.

In 2016, a peer-reviewed article in Collaborative Healthcare, a publication of the Jefferson Center for Interprofessional Education, detailed the hour and a half “Making Safe Moves” course.

Thought to be the first of its kind in the country and the only of its kind at UF, the one-on-one interactive experience meets curricular objectives for both the dental and physical therapy groups and addresses some of the barriers to interprofessional education.

Collectively, physical therapy and dental students who took the initial course agreed that learning how to perform transfers, appropriate body mechanics, and how to address needs for those with mobility deficits were very important.



Goal Two Provide Excellent Oral Health Care Grounded in Evidence

Our Vision

The highest quality oral health care is evidence-based and patient-centered, meeting the needs of our highly diverse community of patients.

UFCD has a longstanding reputation as the primary source for top-quality, affordable oral health services to residents of Gainesville and surrounding areas, as well as in other Florida communities via our community-based dental centers. As a premier U.S. dental school with residency training in every specialty recognized by the American Dental Association, UFCD will strive to become a top destination for advanced or specialty care in all aspects of oral health care.

Objectives

2-1. Develop a robust, patient-centered interprofessional care model with integrated dental and medical management.

In agreement with UFCD’s commitment to educate future dentists through a whole-patient lens that integrates dental and medical care, we will ensure that our patients remain at the center of the care process — from making an initial appointment to participating in care through a comprehensive and individualized treatment plan. Implementing digital dentistry wherever possible can improve patient experiences and help increase practice efficiency.

Implementation Strategies

- ▶ Create and maintain customer-service standards and provide training and support to integrate a culture of service in every aspect of our work.
- ▶ Establish a patient access center to handle phone and online appointment requests, cancellations and patient requests.
- ▶ Ensure prompt replies and feedback to referring dental and medical providers with standard operating procedures facilitated by the use of information technology.
- ▶ Document and follow evidence-based guidelines for patient-care management at the point of care.
- ▶ Optimize standards for patient safety, tracking of clinical adverse events, and quality assurance through efficient and effective use of information technology.
- ▶ Develop and adopt patient-satisfaction measures that assess health and patient-centered outcomes.

2-2. Expand the UFCD clinical footprint to UF Health clinical sites and other locations.

A broader UCFD patient community will benefit us in various ways. UF Health patients will benefit from comprehensive health care that includes oral health. UFCD students will develop a better overall understanding of comprehensive dental care through access to a range of learning experiences.

Our faculty will engage more fully through increased interactions with UF Health medical providers. The resulting increase in numbers and types of patients will enrich students’ and residents’ experiences. Conversely, an increased patient pool can enhance the college’s educational, research and clinical care.

Implementation Strategies

- ▶ Expand availability of clinical care to other parts of Florida.
- ▶ Increase marketing efforts throughout the UF Health community including to faculty, students, staff and patients.
- ▶ Broaden existing UFCD clinical expertise to provide a fuller range of consultation to predoctoral and advanced education clinics.
- ▶ Attract a broader patient population to support residents’ and students’ educational needs.

Goal Two Provide Excellent Oral Health Care Grounded in Evidence

Gentle Dental Care for Kids with Special Needs

Leda Mugayar, D.D.S., recalls when an autistic boy she was treating had trouble pronouncing her name.

“Leda,” she said, and he gave her a look of confusion. She tried “Mugayar,” and got the same response. Then he looked at her and came up with a name of his own.

“OK, Dr. Spaghetti.”

Sitting in the UFCD pediatric dental clinic, Mugayar laughs at the memory, holding her straight blonde hair that had reminded the boy of pasta. There are so many memorable patients and wonderful stories like that one, she says, that make it easy to love her job.

Mugayar is a pediatric dentist, and she said her passion is treating children with special needs. “I don’t do this for me,” she said. “I do this for the children. Because they are the ones that we are here for.”

She said her experience with special needs patients pushed her toward the preventive side of dentistry, because there’s so much you do if you work ahead of the clock. For babies, that means working with their mothers when they are pregnant. And for infants, just being desensitized to the dental visit itself is an effective way to begin prevention of cavities.

Mugayar was born and raised in Brazil, where she graduated from the University of Campinas School of Dentistry. She received pediatric dentistry training in Brazil before she moved to Japan with her son for postgraduate training. Later, they moved to Sydney, Australia, where



“I don’t do this for me,” she said. “I do this for the children. Because they are the ones that we are here for.”

she became the head of Westmead Hospital’s special-needs dentistry department. She then completed a master’s degree in preventive dentistry and community health at the University of California at San Francisco.

Since 2011, she has been on the faculty at UFCD, where she continues to work to expand care for children with special needs.



**Goal Two** Provide Excellent Oral Health Care Grounded in Evidence

**2-3.** Ensure availability and quality of oral health care for underserved communities in Florida.

As Florida’s only state-supported dental school, the UFCD commitment to underserved populations is deeply ingrained within our institutional fabric. We will continue to provide high-quality comprehensive care to people throughout the state through UFCD clinics and our community partners. In addition to providing reduced-fee care in student clinics, UFCD will sustain its support for several community-outreach programs that provide oral health education, screening, prevention and dental services to individuals including those with special needs.

**Implementation Strategies**

- ▶ Bolster support of the UF Statewide Network for Community Oral Health through development of partnerships.
- ▶ Support and encourage service learning in communities through outreach programs and public health rotations to benefit underserved people and enrich student experiences and education.
- ▶ Continue to partner with UF Health to participate in the UF Student Health Professions Education Program to increase opportunities for students underrepresented in the health and research workforce.
- ▶ Prioritize infant oral health education and prevention strategies, and increase access to care for patients with special needs in collaboration with UF Health pediatric medicine specialties.

**Annual Service Trip Provides Dental Home for Bahaman Children**



Since 2012, this annual service trip has provided care for children who live on the largest island in the Bahamas.

Andros is the largest island in the Bahamas and the fifth-largest island in the Caribbean, but not a single dentist lives there to provide care for residents and visitors. The UFCD Bahamas Service Trip, first launched in 2012, provides a much-needed “dental home” for Andros children, providing free dental care in clinics set up in school classrooms with stations for oral hygiene education, prevention, extractions and restorative procedures.

The service trip was created by former UFCD endodontic resident and native Bahaman Dr. Ericka Bennett who teamed with Dr. Abi Adewumi, a pediatric dentistry UFCD faculty member and longtime supporter of dental mission trips. Adewumi has since led the effort, selecting a group of dental students and student leaders to organize the annual trip. The trip typically includes DMD students, faculty, and volunteer dentists and dental assistants. Each year they provide care for hundreds of the island’s children.

**Goal Three** Support & Advance Preeminent Basic, Clinical, Translational and Population-Based Research

**Our Vision**

*A vibrant research enterprise maintains the spirit of discovery that brings to life intellectual curiosity and enhances clinical acumen afforded through scholarship.*

*A strong research portfolio is a hallmark of UFCD’s accomplishments, reputation and success. A thriving research environment ensures that students, residents and faculty remain at the leading edge of biomedical knowledge and practice. Through research, we assure that patient-care is optimally effective.*

**Objectives**

**3-1.** Enhance recruitment and retention of exemplary faculty to advance the research enterprise.

A solid, talented faculty base is essential for sustaining our research program at a high level. We will continue to support and expand opportunities for faculty to conduct research to maintain a strong evidence-based curriculum and clinical care program. Strengthening UFCD’s translational and clinical research enterprise is a focus.

**Implementation Strategies**

- ▶ Conduct strategic recruitment and capitalize on UF campus-wide initiatives to attain a critical mass of productive, research-intensive faculty and clinical researchers.
- ▶ Establish a UFCD research-resource portal to provide current information on research resources, faculty expertise/interests and core facilities; and establish appropriate links with other such portals such as UF Health Bridge.
- ▶ Review and enhance efforts that provide time and resources for clinical faculty to conduct research.
- ▶ Provide additional infrastructure to support research, such as biostatistical support and core facilities.
- ▶ Promote interactions and convey information that will facilitate research by UFCD faculty and trainees.

**3-2.** Promote interdisciplinary and team science.

The large majority of UFCD’s external funding is directed at basic research. Investments in clinical and translational research can diversify our

portfolio and provide additional opportunities for faculty, students and residents to engage in meaningful research and address a wide range of public health needs. Greater engagement with the UF Health environment could create new programs for basic, translational and clinical research—and for integrative approaches.

**Implementation Strategies**

- ▶ Enrich research programs in areas of historical strength, such as biomaterial sciences, with new linkages to translational and clinical research conducted within the UF Health environment and with institutions outside UFCD.
- ▶ Strengthen collaboration with the UF Clinical and Translational Science Institute and integration with major UF research initiatives such as cancer and genomics.
- ▶ Facilitate appropriately-secured access to patient databases for clinical research studies for faculty and students.
- ▶ Optimize conversion of existing activities and resources into research output, including the use of secured clinical databases such as axiUm, EPIC or others.
- ▶ Create a robust mentoring system for clinical faculty and trainees to enhance their ability to conduct research and scholarly work.

**3-3.** Expand extramural research funding.

For the seventh consecutive year, NIH funding of UFCD research and research training has increased. UFCD now receives about \$16 million in total funding each year, ranking us fifth among U.S. dental institutions.

Our five-year goal is to retain top-five status among dental institutions. Given uncertainties in



## A Cavity-Fighting Bacteria?

UFCD research suggests that a type of “helpful” bacteria may provide a new way to prevent caries. Dental caries result from a combination of factors—all of which involve bacteria that feed on nutrients such as sugar and create tooth-eroding acid as a by-product. A healthy mouth requires a relatively neutral chemical milieu; a pH of around 7. When the oral environment becomes more acidic—such as from *Streptococcus mutans*-producing acid—dental cavities or other disorders can develop.

UFCD scientists Robert Burne, Ph.D., and Marcelle Nascimento, D.D.S., Ph.D., took a chemistry-based approach to search for beneficial bacteria that might neutralize acid and avert cavity-based damage. They cultured more than 2,000 bacteria from dental plaque samples and narrowed down the list to 54 microbes that had the necessary metabolic properties to reduce acid. Of those, the researchers closed in on a different member of the *Streptococcus* bacteria family called “A12.”

They learned that A12 breaks down natural molecules in the mouth and creates ammoni as a by-product, which neutralizes acid and that it directly attacks and kills the harmful *Streptococcus mutans*.

The findings suggest that invoking competition among bacterial types in the mouth may prevent cavities from forming by both blunting acid production and allowing bacterial competition to even out bacterial communities. Nascimento and Burne hope to turn their discovery into a tool to screen for people who are at a higher risk for developing cavities, and possibly develop a dietary supplement containing helpful bacteria such as A12.

First discovered in 1924, *Streptococcus mutans* is a facultatively anaerobic, gram-positive coccus commonly found in the human oral cavity and is a significant contributor to tooth decay.

public and private funding environments, growing and sustaining our research enterprise will require a greater degree of innovation.

### Implementation Strategies

- ▶ Establish and disseminate an online repository of available funding opportunities relevant to UFCD researchers and their mentored students.
- ▶ Develop and implement an internal grant-review process to provide constructive feedback for faculty and trainees during early stages of research-proposal development.
- ▶ Target a portion of UFCD fundraising and development efforts to provide resources to research programs.
- ▶ Explore additional partnerships with the private sector to support educational and clinical research.

**3-4.** Increase the quantity of UFCD-wide scholarly activities.

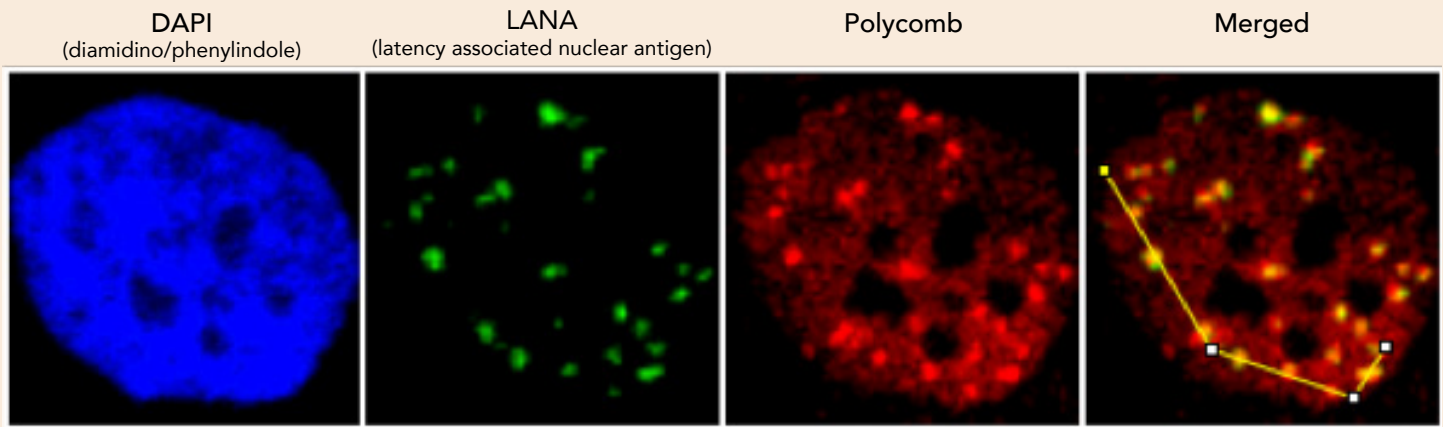
Research represents a core component of the UFCD mission and thus, maintaining a high level of scholarly activity is critical to our success. As biomedicine matures and grows beyond traditional boundaries, we will embrace more and different types of scholarship.

### Implementation Strategies

- ▶ Increase the quantity and impact of scholarly output, including peer-reviewed publications; other written products; and local, regional, national and international presentations.
- ▶ Increase the number of honors and awards earned by faculty, students, residents and other trainees.
- ▶ Create a culture in which scholarship includes a broad range of activities that contribute to generating knowledge, as well as to translating and sharing it.
- ▶ Increase participation of faculty and trainees in the National Dental Practice-Based Research Network.

Image of *Streptococcus mutans*, left, courtesy of Tom Wen.

## Dissecting the Biology of HIV/AIDS Infections



### Using latently KSHV-infected iSLK cells

Polycomb proteins co-localize with and are focally concentrated with latency associated nuclear antigen, or LANA, in Kaposi’s sarcoma-associated herpesvirus KSHV-infected cells. Basically, the green dots indicate the binding of the viral protein LANA to the KSHV DNA in the cells. Red dots indicate different cellular Polycomb proteins that are co-localized with LANA on the KSHV DNA.

Kaposi’s sarcoma is an infection common in people with human immunodeficiency virus, or HIV, and acquired immunodeficiency syndrome, or AIDS. It usually appears first as purplish spots on the face or legs and also on mucous membranes, such as inside the mouth and throat, and on the outside of the eye and inner part of the eyelids.

UFCD scientist Zsolt Toth, Ph.D., is studying the lifecycle and molecular characteristics of Kaposi’s sarcoma-associated herpesvirus, or KSHV, the virus that causes Kaposi sarcoma (as well as some other cancers). Toth has learned that KSHV can hijack components of an infected person’s cellular operations and use them to establish persistent infection as well as cause cancer.

Toth’s research focuses on investigating structural changes to DNA that enable KSHV to toggle back and forth between latent (non-active) and lytic (replicating) forms. Understanding and manipulating those switches may help to keep the virus silent.

In an innovative cross-UF research effort, Toth and his UFCD colleague Bernadett Papp, Ph.D., are working with Laurence M. Morel, Ph.D., of UF’s Department of Pathology, Immunology and Laboratory Medicine to understand how KSHV eludes attack by immune cells in the mouth.



Zsolt Toth joined the college in 2016 as an assistant professor in oral biology.



**Goal Four** Upgrade and Expand Teaching, Research and Clinical Care Facilities and Infrastructure

**Ensuring the Best and Brightest Future Gator Dentists**

For the 2017-18 academic year, UFCD awarded over \$1 million to 76 students. Approximately \$300,000-\$400,000 is awarded annually from funds established by our generous donors.



Dentistry is a highly-rewarding profession, and UFCD is a known leader in providing high quality education and clinical experience for our students. Becoming a dentist is increasingly expensive, though, and the reality of significant future debt for dental students can present a huge burden to aspiring dentists.

According to the American Dental Education Association, or ADEA, U.S. dental graduates in 2017 had an average of \$280,000 of debt, and over 39 percent of indebted dental school graduates in the same year reported debt in excess of \$300,000.

That's why UFCD is taking steps to provide financial assistance for dental students by growing our pool of merit-based and need-based scholarship funds. On average, over the past three years, approximately 180 students apply for scholarships each year.

For the 2017-18 academic year, UFCD awarded over \$1 million to 76 students, including HRSA's Scholarships for Disadvantaged Students. Approximately \$300,000- \$400,000 is awarded annually from funds established by our generous donors.

Health Resources & Services Administration, or HRSA, Scholarships for Disadvantaged Students help UFCD recruit and retain the most talented students. These funds also improve access to a health-professions education and fostering a diversified health workforce, and reduce student debt so that scholarship recipients may be more likely to provide care in underserved areas after they graduate.

HRSA's latest Scholarships for Disadvantaged Students award is \$2.6 million for the 2016-20 period. A total of \$647,979 was designated for the 2016-17 academic year, with recommended future support for the same amount each academic year for the grant period. For the 2012-2016 period, UFCD was one of only three dental schools in the country to receive these highly competitive HRSA grant awards, and one of five dental schools across the country for the 2016-20 period.

**Goal Four** Upgrade and Expand Teaching, Research and Clinical Care Facilities and Infrastructure

**Our Vision**  
*Centralized and efficient management of UFCD operations and development best supports our ability to be an outstanding institution.*

*UFCD's outstanding students, faculty and staff make up the core of our excellence as an institution. Yet to stay at the leading edge of teaching, research and care, we must invest strategically in infrastructure improvements. These efforts will pay off in improved patient care and safety, stronger research and educational programs, and an expanded pool of patients.*

**Objectives**

**4-1.** Renovate and upgrade existing teaching, clinical and research space.

Substantial improvements to our physical infrastructure are critical to accommodate growth and to enable UFCD to remain competitive. Investments should maximize collaboration, integration and communication within UFCD, with UF and UF Health, as well as with our neighboring communities.

**Implementation Strategies**

- ▶ Update plans for a building expansion in Gainesville.
- ▶ Create centralized funding structures for shared resources and staff support.
- ▶ Consolidate faculty and staff reporting structures to standardize hiring and retention policies and practices.
- ▶ Create mixed-use space off campus, such as in locations outside the AHC as well as within the state.
- ▶ Explore and analyze options for new or expanded programs in other locations throughout Florida, including faculty practice, residency training and DMD rotations that support clinical and research opportunities.

**4-2.** Improve the UFCD-wide information technology infrastructure.

Information technology is the backbone of 21st century education, research and health care. Improvements to information technology infrastructure will benefit students and residents as well as patients, researchers and staff. We will expand human capital and physical resources to bolster this key component of the UFCD environment.

**Implementation Strategies**

- ▶ Evaluate, and enhance where needed, current UFCD information-technology structure, support and associated costs, including student learning management systems, individual student dashboards and data warehousing.
- ▶ Update instructional-technology components to enable tracking of assessments and competencies for DMD and advanced education.
- ▶ Explore interoperability and data sharing between EPIC and axiUm clinic-management software systems for both clinical care and research purposes.



Goal Four Upgrade and Expand Teaching, Research and Clinical Care Facilities and Infrastructure

4-3. Implement a multi-faceted institutional development program, including a capital campaign to support faculty, facilities, programs and endowments.

As a nationally ranked institution that is part of the UF family, UFCD has a strong and solid reputation. This favorable standing serves as a launch pad from which to capitalize on successes and further grow resources. Additional revenue earned through philanthropy will support scholarships, faculty recruitment and infrastructure improvement.

Implementation Strategies

- ▶ Launch a multi-year capital campaign that incorporates funding opportunities for key goals and objectives.
- ▶ Employ a more comprehensive approach to engaging donors such as recruiting faculty and students as UFCD ambassadors and increasing outreach to alumni.
- ▶ Develop and implement creative information technology approaches to facilitate giving.
- ▶ Expand relationships with industries, corporations and foundations to increase gifts.
- ▶ Initiate a “grateful patient” program with faculty referrals.
- ▶ Allocate donor funding for educational- and career-developmental needs of residents, postdoctoral scholars and faculty.

Going Greater With UF’s Capital Campaign



In 2017, the University of Florida launched Go Greater - the largest fundraising initiative in its history. The \$3 billion campaign, concluding in 2022, builds on the university’s call to enlighten, to lead and to serve citizens and society at large.

The Go Greater campaign emphasizes projects and programs that encourage collaboration across all of UF’s colleges, units and partners.

The university’s goal of \$3 billion was established so UF can go greater in our communities, our state, our nation and across the globe.

The college’s portion of that goal is to raise \$28 million in gifts through the campaign that spans 2014-2022 to fund important initiatives, including endowed professorships, scholarships, centers focused on excellence in digital dentistry and children’s oral health, and an opportunity for naming of the college.

To learn more about UFCD Capital Campaign initiatives and funding opportunities, please contact: Rick Miller rwmiller@dental.ufl.edu or 352.273.5779

Goal Five Enhance and Maintain a Supportive and Humanistic Environment

Our Vision

UFCD is a premier destination for dental patients, a top educational choice for students and residents, and a stimulating working environment for faculty and staff.

An organization can only be strong when its human capital is united. Students, faculty and staff at UFCD form a special community linked through interests, knowledge, science, curiosity and compassion. We will create an inclusive, supportive and respectful climate that embraces and values diversity — acknowledging that with diversity, we gain a broader foundation of strength, wisdom and creativity. We will foster an environment of support, trust, effective communication, responsible and ethical behavior, and maintain an ongoing commitment to respect within our own institution while we provide care for others.

Objectives

5-1. Enhance and celebrate diversity and inclusion among students, residents, staff and faculty.

Diversity is a means to institutional excellence, and inclusion is diversity’s natural partner. Recruiting trainees, faculty and staff from diverse backgrounds is important for developing an atmosphere of cultural competence in which providers can effectively connect with patient needs and their concerns. Such an environment is essential for delivering optimal patient-centered care and learner-focused education.

Implementation Strategies

- ▶ Continue to use a holistic approach to evaluate and recruit the most talented faculty, students, residents and postdoctoral scholars to UFCD.
- ▶ Recruit outstanding early-career scientists to secure the future of UFCD research programs; ensure that search strategies are objectively based and sufficiently broad in reach.
- ▶ Dedicate resources for additional merit-based scholarships for DMD students and ensure that sufficient unrestricted scholarship aid is available to attract and maintain a diverse student body.
- ▶ Enhance cultural competency in all learning, research and clinical environments.

5-2. Support professional development and leadership of students, residents, faculty and staff.

The 21st century is a time of extraordinary opportunity for biomedicine. Quantum leaps in technology have caused profound shifts in the way we learn, provide care and discover new knowledge. As such, there is a great need to foster an environment of life-long learning and to match this atmosphere with adequate resources for professional development.

Implementation Strategies

- ▶ Develop and evaluate student-resident programming that addresses mentoring, career planning and professional skills management — including “soft skills” such as communication and cultural competency.
- ▶ Provide diverse types of leadership opportunities for students, faculty and administrators.
- ▶ Provide consistent, evidence-based mentoring of faculty and trainees by promoting use of the UF Clinical and Translational Science Institute Mentor Academy.

5-3. Develop a comprehensive UFCD communication plan, promoting the college’s education, research and service missions.

Effective and meaningful communication is a powerful catalyst for maintaining our preeminence and sharing our successes in education, research and patient care. Much more than pushing out information, good communication is bidirectional,



Celebrating Diversity in People and Science



People are more likely to challenge assumptions and derive new ideas in a heterogeneous group. In this way, diversity promotes excellence.

Research shows that people are more likely to challenge assumptions and derive new ideas in a heterogeneous group. In this way, diversity promotes excellence. The concept pertains not only to people, but also to science. Modern biomedicine calls for novel bridging of scientific disciplines and professions to conquer pressing health challenges.

The UF Summer Health Professions Education Program, or UF SHPEP, contributes to learning and discovery for diverse talent by establishing a funding vehicle that applies across traditional curricular and research boundaries. SHPEP is a free, six-week summer-enrichment program focused on improving access to information and resources for underrepresented students interested in the health professions. Launched at UF in 2017, the program allows 80 pre-health students from across the U.S. to attend a six-week program to learn more about careers in dentistry, medicine, nursing, pharmacy, public health and health professions, physician assistant studies and veterinary medicine. The program provides crucial access to information

and resources that will strengthen participants’ knowledge and understanding of each health-related field.

At UFCD, SHPEP program takes the place of the Summer Learning Program, which provided 15 years of guidance, knowledge, resources and support to aspiring dentists from 2002 to 2016. Approximately 65 percent of those students enrolled in dental school, and approximately 30 percent of those students who went on to dental school attended UFCD.

Of the 160 SHPEP students who attended the first two programs, 40 focused exclusively on dentistry. Those students participated in hands-on projects in a dental-simulation lab, shadowed dental students in general and specialty dental clinics, and explored dentistry and its specialties with faculty, residents and students.

involving listening to the needs of our students, faculty, staff — and above all — patient communities. A strategic approach will ensure that we capitalize on these important connections.

Implementation Strategies

- ▶ Expand UFCD regional, national and international branding.
- ▶ Build and maintain a strong relationship with UFCD alumni through online and other communications approaches.
- ▶ Highlight student and faculty success stories to stakeholders, including local and national media, community organizations and alumni.
- ▶ Partner with UF Health in corporate-level communication efforts.
- ▶ Develop and maintain cooperative and synergistic partnerships with other public and private institutions.
- ▶ Increase marketing efforts to attract patients.

5-4. Promote an overall environment of health and wellness.

Individuals and communities are most effective and productive when they are healthy and happy. Access to quality care for body and mind is a high priority for us as a leader in the development and delivery of evidence-based oral health care. We will continue to assess the needs of our own UFCD community and develop resources to meet those needs.

Implementation Strategies

- ▶ Promote responsible environmental stewardship in the communities in which we work and reside.
- ▶ Fulfill our social responsibility to care for underserved communities including patients with special needs.
- ▶ Evaluate potential to develop a self-insurance dental plan for UF students, faculty and staff.
- ▶ Support infrastructure changes that foster and promote physical and mental well-being.

The Brightest of Futures



Since the first class of 24 predoctoral students enrolled in our DMD program in 1972, UFCD has continuously focused on our mission of excellence in education, research and patient care. We work, together, to improve the lives of the patients we care for, to advance scientific discovery, to educate the best dentists and specialists in the U.S., helping create a brighter future for everyone.



## 2019-2024 Strategic Planning Process

This strategic planning process launched in April 2017, seeking to designate key priorities and actions to advance the work of UFCD as one of the nation's premier graduate and post-graduate schools of dentistry. The strategic plan provides a framework for identifying key institutional needs, opportunities and priorities; for evaluating relevant trends in dental education, research and patient care; and for supporting future decision-making related to programs, facilities, outreach, services and finances.

Key features of the strategic planning process included:

- ▶ An analysis of significant trends confronting schools of dentistry, dental practitioners and academicians, and research investigators.
- ▶ Formation of a 16-member Steering Committee composed of department chairs, college administrators, researchers, clinicians, students and residents. The Steering Committee provided input and advice to the dean on all phases of the process and played a pivotal role in the review of the plan.
- ▶ Establishment of four area-specific working groups: Education; Research; Patient Care; and Institutional Growth, Support and Advancement. After extensive review and discussion, each working group developed specific programmatic recommendations that were incorporated into the strategic plan.
- ▶ Town hall meetings and focus groups were held to encourage and secure input from key stakeholder audiences. These groups included students, residents, and advanced education participants; faculty and staff; practicing clinicians; alumni and industry representatives.

Implementation of the plan was managed by the standing UFCD Strategic Planning Committee, whose members will consider and recommend to the dean timelines and other specific deliverables.

Published October 2018.

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For more information and updates, please visit [StrategicPlan.dental.ufl.edu](https://StrategicPlan.dental.ufl.edu)





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