

gator dentist^{TODAY}

A Publication of the University of Florida College of Dentistry Summer 2006



THE SUPER POWER OF
TASTE

UNIVERSITY *of*
FLORIDA

The University of Florida is in Gainesville.

The Gator Nation is everywhere.

Our campus is easy to find. The boundaries are well defined, tangible and concrete. The Gator Nation, however, cannot be confined to a map. It's everywhere Gators live and work. Some of us form companies. Some of us write novels. Others cure diseases, raise families or lend a helping hand. Yet we all share a common bond.

We are The Gator Nation.

UF UNIVERSITY of
FLORIDA
The Foundation for The Gator Nation

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for the alumni, faculty, staff,
students and friends of the
University of Florida
College of Dentistry

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UF College of Dentistry
UNIVERSITY of FLORIDA



FROM THE DEAN



As you may have gathered by our unusual cover, the University of Florida College of Dentistry has embarked on a "tasteful" exploration of taste and smell with the establishment of the college's interdisciplinary Taste and Smell Clinic and the appointment of Linda Bartoshuk, Ph.D., an internationally known researcher in the chemical senses of taste and smell.

Dr. Bartoshuk's research will complement patient care in the clinic, which treats patients suffering from smell and taste disorders or loss of taste due to disease or cancer therapy. (See the complete story on page 20.) Dr. Bartoshuk, who comes to UF from Yale University, is a fellow of the National Academy of Sciences, one of a handful of NAS members, and the only woman NAS member at UF. Dr. Bartoshuk is now a presidential endowed professor of community dentistry and behavioral sciences here at UFCD, and we are excited to have her on our faculty.

The college has much good work taking place everyday. One achievement of particular pride to me is that of the Class of 2006, which enjoyed a 100 percent first-time pass rate on the Florida licensure examination. This is the third consecutive exam administration UFCD seniors have achieved a 100 percent first-time pass rate on the board exam, a testament to the hard work students, faculty and staff have invested into exam preparation. We've highlighted commencement activities for the Class of 2006 on page 24.

I am also pleased to report that Dr. Boyd Robinson, as of June 1, is the college's associate dean of clinical affairs. You can read more about Dr. Robinson on page 17, but he will be instrumental to enhancing student educational and patient clinical experiences in the student clinical enterprise. Dr. Robinson has hit the ground running with a tremendous amount of enthusiasm and dedication, already tackling reorganization of the college's treatment planning clinic to streamline and calibrate patient treatment.

On a final note, the college's redesigned Web presence launched this August. The college's online home, located at www.dental.ufl.edu, features a new look and enhanced interactivity designed to provide top of the hour news and information for patients, students, alumni and friends. I hope you will take time to visit and explore UFCD's Web site, and provide us with feedback on how we can make it more useful to you.

Best wishes,

Teresa A. Dolan

Teresa A. Dolan, D.D.S., M.P.H.
Professor and Dean

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continuing dental education

See back cover for course list.



ON THE COVER

Are you a supertaster...
or are your taste buds duds?
Find out on page 20.



Expanded Opportunities for Florida's Internationally Trained Dentists

The Florida Legislature provided a \$300,000 one-time allocation earmarked to expand educational opportunities for internationally trained dentists seeking licensure to practice in Florida.

The state money — which was allocated after extensive legislative review of a University of Florida report on options for expanding UF's 2-year supplemental education program for foreign trained dentists — will be used to support Nova Southeastern University's 3-year program in a collaborative effort between Florida's two dental schools to offer an immediate enrollment increase of 11 students in NSU's international program.

In its report to the legislature, the University of Florida presented three options to expand the UF Internationally-Educated Dentist Program, but each would have required additional state support and time for implementation before

enrollment could be increased. These included:

1) Renovation of the second floor of the UF Hialeah Dental Clinic, 2) construction of a new facility elsewhere in the state, or 3) expansion of the existing Dental Sciences Building in Gainesville, which would accommodate increased enrollment in the college's D.M.D. program and Internationally-Educated Dentist Program. These recommendations were not funded by the 2006 legislative session.

"Nova was best poised to offer an immediate increase in enrollment in a cost-effective and timely way," said UF College of Dentistry Dean Teresa A. Dolan. "UF remains willing to increase the size of our Internationally-Educated Dentist Program, assuming appropriate funding is in place to support facilities expansion and hiring of faculty and staff necessary to support the increase in enrollment," she said. ♦



Kaplan Scholar James B. Summit, D.D.S., M.S., professor and chair of restorative dentistry at the University of Texas Health Science Center, talks with UF dental sophomore Heath Perry in the college's Preclinical Simulation Laboratory during Summit's January visit to UF as the 2006 Kaplan Scholar. Summit's Kaplan Scholar lecture to UFCD faculty and students took place Jan. 24 and was titled, "Changes in operative dentistry: New and in the future."



Dental History Display Gets With the Times

The College of Dentistry's West Entrance display of venerable dental equipment has enjoyed a recent makeover. Mothballed for two years during renovation of the West Entrance lobby, the antique dental office furnishings and equipment were returned to their glass alcove this year.

Track lighting has been installed to highlight the artifacts, which are tastefully arranged to emulate a dental office setting. The display will be accompanied by a touch screen computer kiosk in the lobby programmed with the presentation, "New Advances in Dentistry," and a graphic mural depicting the history of dentistry in Florida is under design for installation on the currently empty walls. The idea is to highlight dentistry's early history in Florida juxtaposed against the profession's amazing modern technological advances to educate passersby and dental patients waiting in the lobby.

Most of the items in the UFCD Dental History Display — including a rare, early 1900s Victor X-ray machine, sterilization autoclave, vintage vials of anesthesia and glass syringes, dental chair and foot-operated drill unit, as well as an unusual collection of malformed molars kept as trophy extractions — was donated by St. Augustine dentist, Dr. W. M. Newell, who retired from dentistry at the age of 93 in 1986.

Now, through a project led by Coordinator of Academic Programs Gail Mitchell, each item has been documented and tagged to facilitate its preservation and chronicle its historical significance to the profession. The college's Academy of Senior Faculty have agreed to take on fundraising efforts to support the continued upkeep and special projects for the display — such as an interactive Web-based tour of the dental artifacts. ♦

Fourth Annual Research Day

The college hosted its fourth annual Research Day on April 7. **Mary MacDougall**, Ph.D., professor of oral and maxillofacial surgery, the James R. Rosen Chair of Dental Research and associate dean for research at the University of Alabama at Birmingham School of Dentistry, delivered the keynote presentation, "Discovering your future with a smile: Dental research opportunities." Research Day speakers also featured National Academy of Sciences member **Linda Bartoshuk**, Ph.D., visiting professor in the College of Public Health and Health Professions, who presented, "Are you a supertaster? How do we know? What does it mean for your health?" and **Kenneth Berns**, M.D., Ph.D., director of the UF Genetics Institute, gave a presentation entitled, "Gene Therapy."



Mary MacDougall, Ph.D.

D.M.D. Division First Place Poster Presentation Award

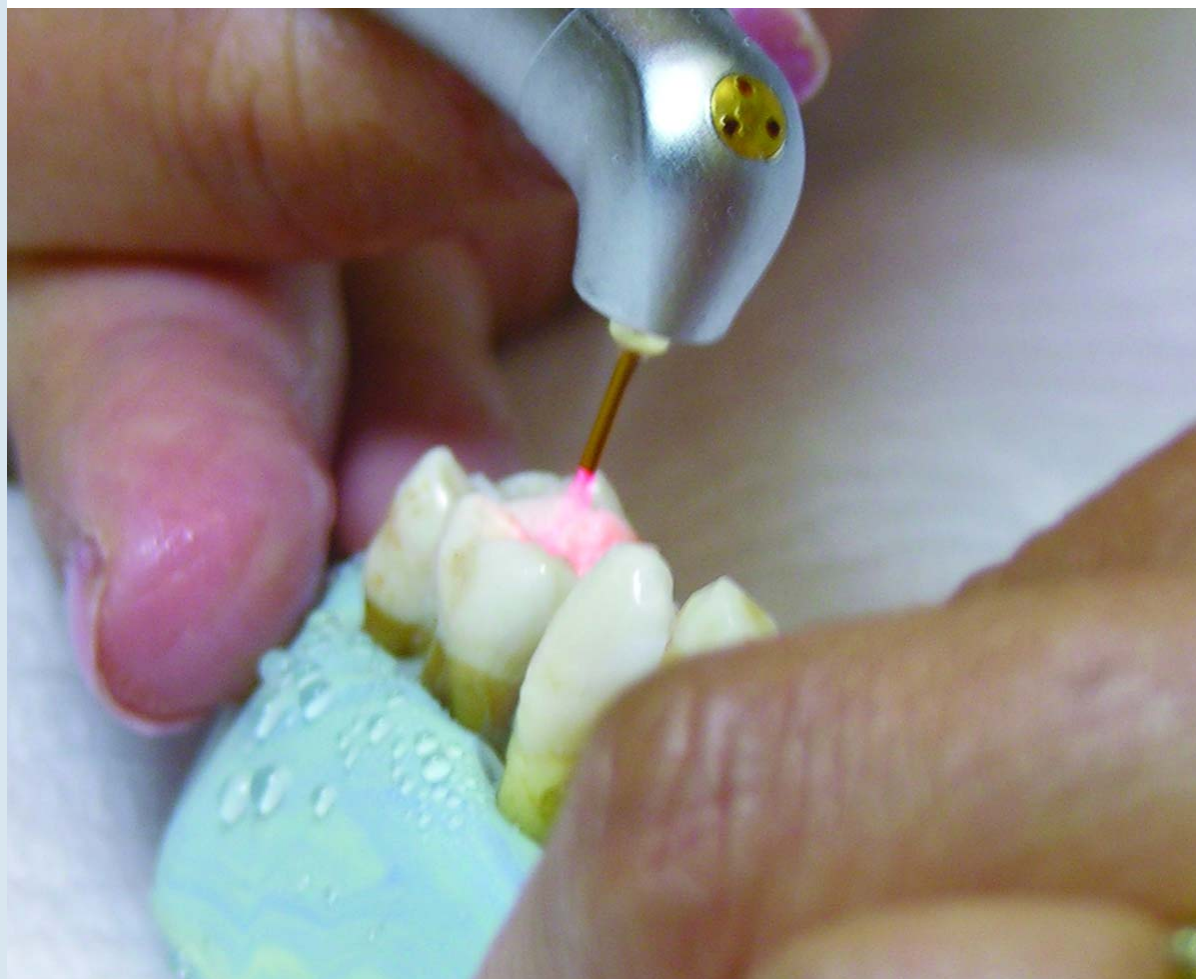
Anna Pyatigorskaya: Mapping of Antibody Specificity Using an Overlapping Peptide Epitope Array, *A. Pyatigorskaya, M.J. Fritzler, E.K.L. Chan, Department of Oral Biology*

M.S./Resident Division First Place Poster Presentation Award

Rita Hurst: Cytoskeletal Dynamics and the Ruffled Plasma Membranes of Osteoclasts, *I.R. Hurst, S. Vergara, S.A. Weed, U. Walter, K. Johnson, J. Zuo, L.S. Holliday, Department of Orthodontics*

Ph.D./Post-doc Division First Place Poster Presentation Award

Lin Zeng: Identification of a Fructose/Mannose-specific Sugar: Phosphotransferase System in *Streptococcus mutans* UA159, *L. Zeng, Z.T. Wen, J. Abranches, R.A. Burne, Department of Oral Biology*



Laser Dentistry introduced in UFCD clinics

The University of Florida College of Dentistry and Biolase Technology, Inc. have contracted to place six Waterlase MD™ lasers in the endodontic, faculty practice, operative and pediatric dental clinics as part of the Biolase University Program.

With declining state support for dental education and increasing costs of providing the highest possible quality in clinical education using contemporary technology, the college is pleased to be one of the first institutions to participate in the launch of the Biolase University Program. UFCD faculty is excited to gain hands-on experience with the Waterlase MD™ technology, and the college anticipates advancing its use through clinical

research and incorporating, where appropriate, content into the various college curricula.

The college and faculty are extremely pleased to be one of the first dental schools in the nation to formally include laser dentistry in its curriculum, enabling learning experiences for students to use cutting edge technologies to deliver the highest level of excellence in patient care. ♦

ABOVE: The WaterlaseMD™ laser cuts into a practice tooth held by Clinical Assistant Professor Geraldine Weinstein during the April 7 faculty training session hosted by Biolase. The laser beam energizes water molecules in a sputtering action that debrides hard and soft tissues.





Now a TMJ success-story, Altieri and her rescue-dog Buckley practice mouth-stretching exercises.

One woman's 24-year odyssey through TMJ pain and recovery

On October 25, 2002, I entered the University of Florida College of Dentistry Parker E. Mahan Facial Pain Center for a routine check of my Teflon/Proplast Vitek temporomandibular joint implants. I'd had no pain since the implants had been placed in 1985, but something wasn't right — the implant screws were bulging under the skin on both sides of my face and my mouth wouldn't open more than 15mm, just wide enough to insert a tiny forkful of food.

Instead of the routine exam I expected, I received news that shocked me and sent me into an emotional tailspin. Radiographs and CT scans revealed the Teflon temporomandibular joints of my Vitek implants had severely deteriorated, and chronic inflammation had eroded the bone of my jaw and opened holes into my skull.

The UF oral and maxillofacial surgeon examining me, M. Franklin Dolwick, D.M.D., Ph.D., said he had never before seen such a severe case of TMJ erosion. I would need a series of surgeries to salvage what was left of my jawbone and to prevent any permanent damage to my cranial cavity and brain.

I was distraught beyond words. Little did I know that my medical journey at the University of Florida College of Dentistry and Health Science Center would become a cathartic, life-changing experience.

This journey introduced me to the wonderful interdisciplinary effort of the world-class UF surgeons and their surgical and clinical teams. These men and women saved my life and returned me to a quality of life I thought was lost.



ABOVE: In lieu of arch bars, Altieri's orthodontic braces, placed to assist in correcting her malocclusion, were fitted with posts to support rubber bands that held her jaws securely closed during post-surgical recovery.

RIGHT: M. Franklin Dolwick, D.M.D., Ph.D., conducts an examination of Altieri's occlusion and jaw mobility during her recent visit to the Parker E. Mahan Facial Pain Center.

A LITTLE BACKGROUND

Temporomandibular joint, or TMJ, dysfunction is estimated to affect 30 million Americans, with nearly 1 million new cases of TMJ disorder diagnosed on an annual basis. More than 90 percent of TMJ sufferers are women. In most cases, teeth equilibration, splints, orthodontic treatment and physical therapy are enough to relieve TMJ pain and dysfunction, or at least bring it to levels patients can manage. Sometimes pain relieving and anti-inflammatory drugs are prescribed, but surgical intervention is necessary in only eight percent of all TMJ cases.

My TMJ story began in October of 1982 as the excitement of a recent move from Connecticut to start a new job in Washington, D.C. was marred when I began experiencing terrible facial pain and "lock jaw" anytime I yawned or chewed.

I didn't know what "TMJ" meant, but soon found out it was a fairly common ailment where the jaw joint can become dislocated, resulting in pain and severely decreased jaw mobility. Because the jaw joints work as hinges in tandem with each other, TMJ problems typically affect both sides. When left untreated, TMJ can develop into a chronic neurological pain problem.

LOSING FAITH

My dentist in Washington, D.C. referred me to a local TMJ clinic. The private surgeon I consulted there conducted a series of orthognathic, tongue and disc surgeries without first having prescribed any orthodontic treatment. However, when my TMJ pain and dysfunction only worsened, he gave up on treating me — without ever having consulted one other TMJ expert about my case. He even complained that I wasn't *trying* to recover and that my TMJ problems were my own fault.

Although the physical scars of his "treatment" would heal, the emotional scars caused by this surgeon's callous attitude and lack of concern remained with me for decades, leaving me

disillusioned and distrustful of the medical profession.

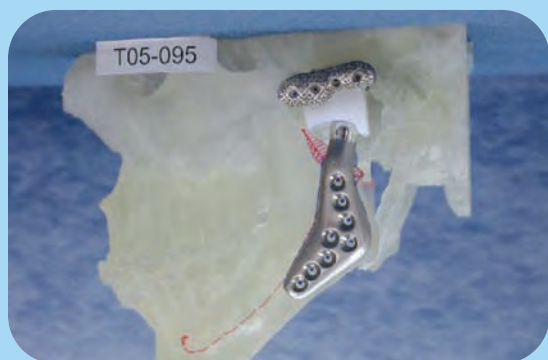
Nonetheless, to repair what still was not right, I made an appointment in 1984 with oral surgeons at the Georgetown University Clinic. I quickly learned that being connected with a major research hospital allows for more patient/doctor interaction, more accountability on the part of the medical team, and more involvement of residents, who asked almost as many questions as I did.

My maxillofacial surgeon at Georgetown had been a student and protégé of Dr. Dolwick's at the University of Texas and always referred to Dr. Dolwick as being his most valued mentor. The surgery the Georgetown team performed to relieve my problems was bilateral TMJ reconstruction with glenoid fossa implants. The implant of choice was the Teflon/Proplast implant, manufactured by Vitek.

At that time, the Vitek Proplast implant was considered state of the art in TMJ replacement surgery. It became available in 1983 and was implanted in an estimated 30,000 patients before the U.S. Food and Drug Administration yanked it off the market in the early 1990s.

Early reports on the success of Proplast implants in relieving TMJ pain and increasing jaw function were favorable, with 91 percent of patients studied claiming good results within the first three years after implantation.

Over time, however, the Proplast failure rate skyrocketed to more than 90 percent. The implants' Teflon joints gradually disintegrated inside the body, leading to a condition called "foreign body giant cell reaction," or FBGCR, where the body destroys its own hard and soft tissues in a futile effort to encapsulate and absorb the Teflon particles — this out-of-control immune response destroyed patients' bone and soft tissue, eroding away the bone of the jaw and often proliferating into the skull.



Locking down causes of Temporomandibular jaw disorder

The College of Dentistry is participating in a seven-year, \$19.1 million, federally funded study of the causes and treatments of temporomandibular jaw disorder, or TMJ. The four-center study is based at the University of North Carolina Chapel Hill, and the UF effort, led by Roger Fillingim, Ph.D., professor of community dentistry and behavioral science, will be based in the college's Parker E. Mahan Facial Pain Center.

The study, called Orofacial Pain: Prospective Evaluation and Risk Assessment, or OPPERA, is the first, large-scale clinical study of its kind to examine the risk factors that lead to TMJ. OPPERA will track 3,200 healthy volunteers for three to five years to see how many will develop

the disorder. The expectation is that patterns in genes and other biologic factors contributing to pain sensitivity, which increase the risk of developing the disorder, may be identified. It is hoped these findings will lead to improved treatments and methods of earlier detection.

Other investigative units participating in the OPPERA study include the University of Buffalo-SUNY and the University of Maryland at Baltimore.

The National Institutes of Health estimate as many as 15 percent of Americans may suffer from TMJ-related jaw pain and restricted movement. TMJ seems to affect women more than men, and the cause of the disorder is often unknown.

LEFT: A resin model, made from a CAT scan of Altieri's skull, shows the left and right placement of the fossa and condylar implant components during pre-surgical planning.

Class action lawsuits abounded, the Vitek company went bankrupt and its CEO escaped to Switzerland.

Unaware of all this, I moved to Pinellas County, Fla., where, in 1990 I read a brief article in the local newspaper about a recall of the Vitek Proplast jaw implants. I was concerned, but, since I wasn't experiencing discomfort or pain at the time, I decided a check-up could wait.

Ten years later, with implant screws protruding noticeably under my skin and limited jaw mobility, I decided it was time for a check-up. I made an appointment for an examination with Dr. Dolwick at the University of Florida because my surgeon at Georgetown emphasized Dr. Dolwick was the man I needed to see.

Sadly, by the time I met Dr. Dolwick, I had become a Teflon/Proplast Vitek Implant poster child. Because the deterioration of my implants wasn't painful, I never realized my serious peril until Dr. Dolwick broke the news that fateful day in October of 2002.

BACK TO THE FUTURE

I became hysterical when Dr. Dolwick presented me with the facts of my condition. My family and I left that visit in silent shock. During the next few weeks I would experience denial, anger, panic, worry, depression and extreme helplessness. I couldn't believe this was happening to me.

Through my decades-long TMJ ordeal I had lost confidence in the medical profession and I wasn't ready to face the surgical nightmares again. My mind was a chaotic jumble of thoughts about loss of personal and work time, fear of needles, dread of the extreme pain, feel-

ings of suffocation, concern about weight loss (my normal weight was only about 115 pounds), worry about complications like infection, abnormal scar tissue, facial nerve damage and hearing loss.

I also grappled with pragmatic uncertainties regarding the potential of another failed implant surgery, the costly financial burden, and general frustration with the lifestyle change necessary during the surgical recovery period. In addition, I worried about the strain this would place on my elderly mother, who had always been my key support for the other surgeries when my father was still alive, but would now have to again see me go through all these surgeries—this time without dad.

All of it was too much to bear.

WHEN THE GOING GETS TOUGH, THE TOUGH GET GOING

Throughout it all, my surgical and rehabilitative team, Dr. Dolwick, Calogero Dolce, D.D.S., Ph.D., of the orthodontic department, and Melvin Benson, D.D.S. — now retired, but who at that time headed the Parker E. Mahan Facial Pain Center — were very supportive and sympathetic. They understood the psychological fallout of my condition was more difficult for me to cope with than any physical pain. *(continued next page)*



(continued from previous page)

It was suggested that I obtain some psychotherapy, which I did through recommendation from my local primary care physician. I benefited from Eye Movement Desensitization and Reprocessing (EMDR), the purpose of which was to cleanse my mind of all past experiences and gain control for upcoming surgeries. This therapy, conducted by a very experienced mental health professional, helped me with positive visualizations, hypnosis and pain management. After several months of treatment, I felt ready to face the TMJ demons and to get through this new round of surgeries.

Dr. Dolwick was patient and considerate of my fears. He allowed me to tape record my sessions with him, responded quickly to all my emails, and really worked to put my mind at ease, reassuring me that he and his team would take the best possible care of me.

They made me feel like my case was the most important one on their calendar, giving me a resurgence of hope and trust in the medical profession.

The first round of surgery took place in June 2003. The Kent-Vitek fossa prosthesis was removed by the expert team of Dr. Dolwick and Stephen B. Lewis, M.D., from neurological surgery in the College of Medicine. To remove the Teflon particles from my cranial cavity, my brain was gently pushed aside, like a couch on cleaning day, so the surgeons could reach the affected areas.

The surgical report states that they “reconstructed the bilateral mandibular glenoid fossa with bone graft from the left anterior superior iliac crest.” In language I could understand, they removed a piece of my hip bone and used it to seal the holes in the jaw joints and lower skull area. Pretty amazing, isn't it? I think the residents passed out tickets to see this rare and unusual surgery.

The great news is that they did all this and didn't have to wire my jaw shut like they thought they would. I healed beautifully. I didn't have jaw joints but still functioned fairly normally. The next step would be to implant new jaw joints. Dr. Dolwick recommended a company in California called TMJ Concepts, which, at that time, was the only FDA approved TMJ implant available. The Lorenz Total TMJ Replacement System has since become FDA approved.

The bilateral TMJ gap arthroplasty surgeries were scheduled for March 2005. During what had become my family's routine, three-hour drive from Pinellas County to Gainesville, my mom, husband and I stopped at an Outback Steakhouse on the way so I could have my last solid meal. I ate every last bite of my steak dinner!

a special thanks from Karen

I want to appropriately commend the exceptional teamwork of the oral and maxillofacial, orthodontic, facial pain, radiology, anesthesiology, and neurosurgical departments. I am so grateful for the extraordinary care and concern I received from all the medical and surgical staffs. The doctors' superior case knowledge combined with their diligence, thoughtfulness and “team approach” to my special circumstances were a Godsend.

Additionally, I extend a great big “thank you!” to the residents and fellows who worked so closely with Dr. Dolwick on my case. These include: Chadwick J. Marshall, D.M.D., M.D.; Shelly Abramowicz, D.M.D.; Scott A. Wenk, D.D.S., M.D.; Jennifer J. Liu, D.D.S., M.D.; Dae-Sung Kim, D.D.S., M.S.D.; Benjamin J. Schlott, D.M.D.;

Gregory T. Tull, D.M.D.; Charles N. DeWild, D.M.D., M.D.; Akif Shinaishin, D.D.S.

Another note of thanks to James Pettigrew Jr., D.M.D., director of dentistry's division of oral and maxillofacial radiology, and to the doctors and staff of Shands anesthesiology department — especially Dietrich Gravenstein, M.D. — for their ability to intubate me despite such a small oral opening.

Finally, a special thanks to my local dentist, David Zabrocki, D.D.S., and his wonderful dental hygienist, Sandy Drugash, for their patience and care in maintaining my oral health and hygiene during all the years I had such a limited opening and especially while my jaws were wired shut during recovery.

The next day, after a sleepless night, I arrived at the Health Science Center for my surgery. As with all surgeries, a patient may not eat or drink after midnight, so I was really shaky and weak by the time we marched up to the surgical pre-op area — I can honestly say the EMDR treatments helped tremendously in training me to calm anxiety.

One of the biggest fears I had was of being wired shut again during recovery. I had had my share of the closed-mouth Hannibal Lecter look and the curious reactions I had experienced from people after the 1983 surgery. I am of Italian heritage and, as Dr. Dolwick knows all too well, quite a gabber. To not be able to speak very well for nine weeks was a struggle, but I got through it.

I was thankful that there were so many more tools at my disposal this time to help in communicating. Twenty-two years ago when my first implant surgery was performed, I had to use a note pad and pen to communicate. Now I could communicate via email.

During recuperation, I began to write a series of short stories to update family and friends entitled, “As the Jaw Turns,” closely followed by another series titled, “Jaw Wars,” which included “The TMJ Menace,” “Revenge of the Implants,” “Return of the Jedi Jaw Forces,” and “All Hail Titanium.”

I emailed these soap opera vignettes to friends and family to chronicle the various adventures I had while undergoing this ordeal — like consuming approximately 150 cans of soup and more than 200 smoothies. I found it helped me to release the negative emotional stress and face this experience with the healing power of humor. And, of course, I could not have gone through this ordeal without the strengthening power of prayer.

I'VE GOT A NEW ATTITUDE!

On May 11, 2005 the second part of my repair procedure was conducted: bilateral gap arthroplasties; bilateral coronoidectomies; bilateral TMJ reconstruction with TMJ Concepts titanium prostheses (custom-made for me!); and an abdominal fat graft.

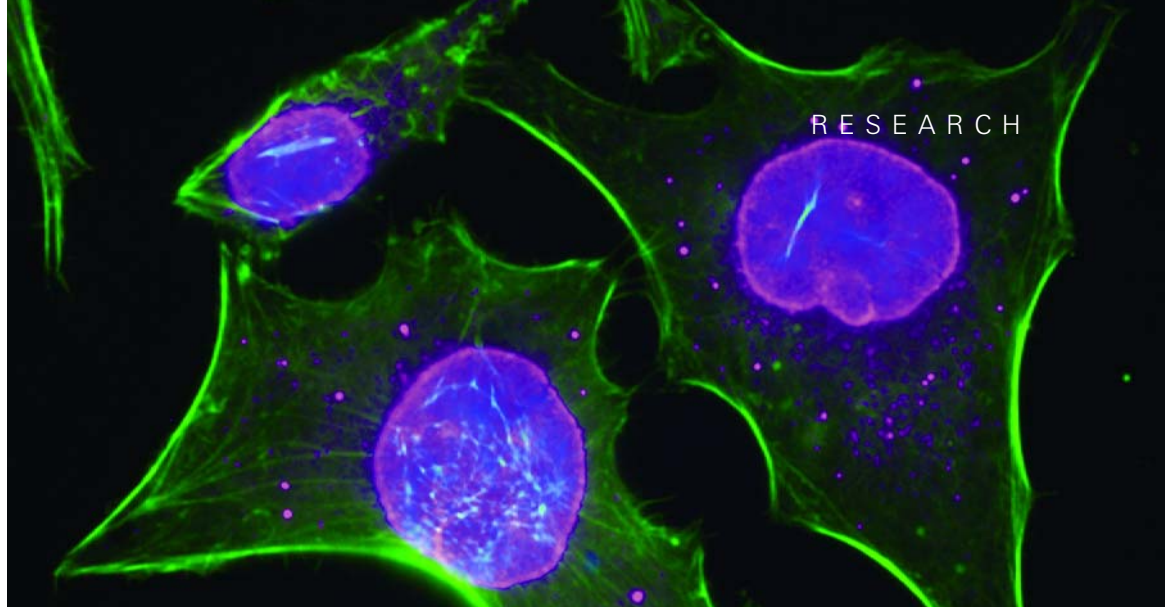
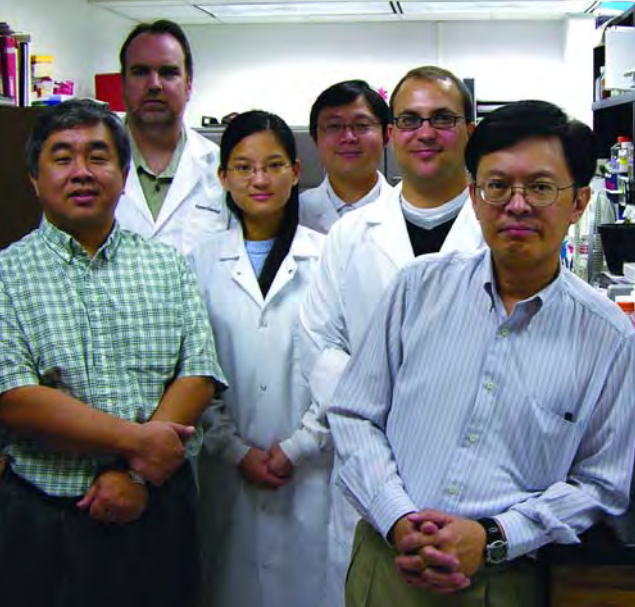
Once again, the Dolwick team came through and the surgeries were completed with such precision that I now had a wonderful occlusion, was able to open my mouth to almost 35 mm and even had some lateral jaw movement. A six-month series of postoperative physical therapy sessions, with special laser and ultrasound treatments got me opening to 40 mm — thanks to my local physical therapist, Dr. Diane Hartley, another UF grad who studied under Dr. Parker Mahan.

Now I have a profound sense of peace and happiness. I count my blessings every day for having found such a magnificent group of doctors. They helped to negate all the bad experiences I encountered with the first private D.C. surgeon. I know now that it was not “my fault” that I had difficulty opening my mouth and that there was truly a physical limitation preventing me from doing so. I have learned to enjoy eating again, and the 35 pounds I've gained in the past six months proves it!

I hope my story will help others who may need to go through what I did. I encourage all patients to work with medical staff to make educated decisions about surgery. I encourage all doctors to carefully research all the conservative treatments possible for their patients before recommending irreversible surgical procedures.

I can't turn back the clock to erase all the surgical treatments I underwent in the 1980s to relieve the TMJ pain. I have been told I am a miracle case; but, having gone through eight surgeries in 24 years, I do believe that I am at the right place now, in the right hands, and have hope that these new titanium implants will last my lifetime. ♦

Karen Altieri lives in Largo, Fla. with her husband, Jan Majewski, and their rescue-dog, Buckley. She directs the Faculty Credentialing Office of St. Petersburg College and may be reached at altierik@spcollege.edu.



Cellular Soup

Tiny cellular structure plays big role in mammalian gene regulation

BY LINDY MCCOLLUM-BROUNLEY

University of Florida researchers have discovered a new ingredient in our cellular soup, tiny structures that may lay the groundwork for how new cells form and then function.

The structures, dubbed GW bodies by UF and University of Calgary research collaborators who identified them in mammalian cells, were described in the December 2005 issue of *Nature Cell Biology*. The cellular structures play a crucial role in gene regulation, known as RNA interference, and their discovery heralds a fundamental shift in scientists' understanding of cell biology that could open up new treatments for cancer and autoimmune diseases and lead to better ways of manipulating genes for therapeutic purposes. Similar structures have previously been found in other organisms, such as yeast, where they are known as P bodies.

GW bodies, which are found outside the cell nucleus in the jelly-like material known as the cytoplasm, appear to be part of the body's recipe for regulating how snippets of genetic material called microRNA switch genes off to control cell reproduction and development. UF scientists found this process functioned poorly in the absence of GW bodies. Dysfunction of microRNA in turning off genes could theoretically allow for the uncontrolled cell growth that characterizes cancer.

"The significance of our study is that it is one of the first to stress the importance of this pathway with respect to cell biology by demonstrating that the specific micro-environments of the GW bodies within the cell appear to be crucial for the proper functioning of the RNA interference process," said Andrew Jakymiw, Ph.D., a postdoctoral associate in the UF College of Dentistry's department of oral biology. "This RNA interference pathway is revolutionizing the way people do research and potentially the way people may apply therapies."

The study of RNA interference is a relatively new field in the science of cellular biology. Discovered in 1993, it is nonetheless an ancient cellular mechanism that predates the divergence of plants and animals to shape life as we know it.

Imagine the cell as a factory making proteins essential to cellular function and health. Strands of messenger RNA, acting as subcellular photocopy machines, use the genetic information within the cell's DNA as a template to produce new protein copies.

But RNA interference acts like a paper jam, blocking RNA's ability to communicate the complete genetic code for the assembly of the protein.

In their study, UF researchers constructed small RNA molecules to induce RNA interference in cell cultures in the laboratory — entirely silencing the targeted messenger RNA and shutting it down for eventual decay. But they were unable to do so without the presence of the GW bodies.

"Our data show that if GW bodies are not present in the cells, then RNA interference is dramatically inhibited," said study co-investigator Edward Chan, Ph.D., a UF professor of oral biology. "So GW bodies are a gateway to successful RNA interference."

Chan and Jakymiw believe their team's discovery of GW bodies as the cellular focal point of RNA interference may one day enable doctors to exploit the process to silence genes that cause cancer cells to madly multiply or to restore health by returning malfunctioning cells to a normal state.

"Abnormal mutation or expression of microRNA, and dysfunction in regulation in the microRNA, can lead to cancer and could play a potential role in autoimmune diseases," Chan said. "RNA interference is an interesting concept for potential clinical therapy; you could target

Upper left: Edward K. L. Chan, Ph.D. (right foreground) with research laboratory personnel, (from left) Minoru Satoh, M.D., Ph.D., research associate professor of rheumatology; John C. Hamel, lab technician; Shangli Lian, IDP graduate student; Songqing Li, IDP graduate student; and Andrew Jakymiw, Ph.D., postdoctoral fellow. Right: GW bodies are the tiny cellular structures stained magenta in these cancer cells magnified 400x. Actin fibers, which make up the cells' cytoskeleton, are counterstained in green and the nuclei in blue.

small interfering RNA at any gene you suspect may play a role in helping cure disease."

The UF/UC study of GW body function in mammalian cells is similar to research performed on P body function conducted by scientists at the University of Arizona and Cold Spring Harbor Laboratory in New York. Their study is published in *Nature Cell Biology* as a companion to the UF report.

"The GW bodies are relatively new, so we don't really understand their broader function in the cell," said Roy R. Parker, Ph.D., Regents professor of molecular and cellular biology at the University of Arizona and Howard Hughes Medical Institute investigator. "But it appears that sequestration of the molecules away from the rest of the cytoplasm is important to the silencing, preventing the messenger RNAs from functioning."

Parker said the idea behind using gene therapy to turn genes off or on to treat diseases has been around for a long time, but successfully delivering gene therapy to cells in living organisms is still a work in progress.

"I think it will have to be a combination of everybody doing their share of research to bring the puzzle together," Jakymiw said. "Hopefully, understanding how the GW bodies work in regard to RNA interference will combine with other studies to one day result in improved therapies." ♦

Take it to Heart

Infectious oral bacteria fingered in cardiovascular disease

BY LINDY MCCOLLUM-BROUNLEY

An emerging pathogen is on the loose, insidiously spreading infection to kill nearly 1 million Americans every year.

It isn't West Nile Virus or bird flu.... It's the vicious bacteria that cause gum disease.

"The National Institutes of Health include under the umbrella of emerging pathogens chronic diseases that are recently recognized as being infectious," said Ann Progulske-Fox, Ph.D., professor of oral biology at the University of Florida College of Dentistry. "For example, cardiovascular disease, which was thought not to have anything to do with infections, is now looking more and more like an infectious disease."

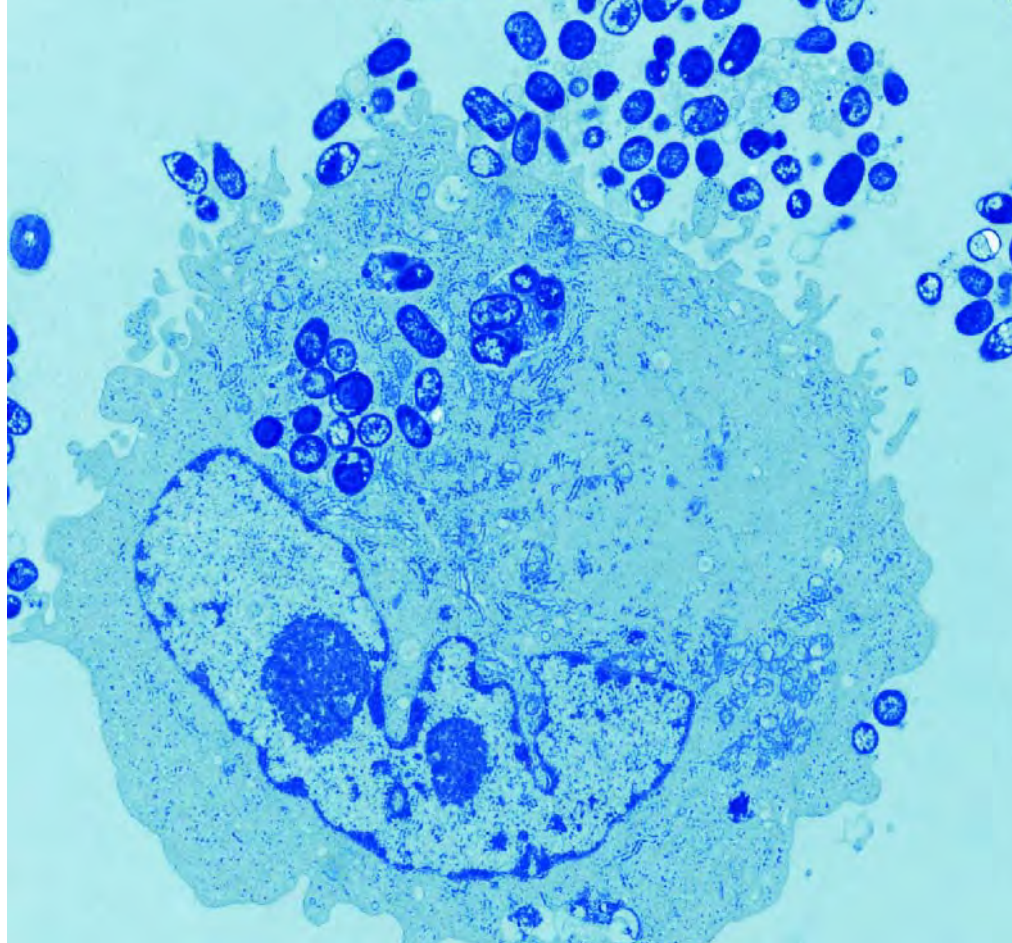
Deadly cardiovascular disease has previously been linked with periodontal, or gum, disease, but the presence of live oral bacteria in blood vessel tissues had not been proven beyond doubt until Progulske-Fox's lab dredged them out of diseased human arterial plaque. The report was printed last year in the journal *Atherosclerosis, Thrombosis and Vascular Biology*.

Oral bacteria as an emerging pathogen may surprise some, but not Progulske-Fox. She's one of the world's leading bacteriologists examining the genes the bacteria use to infect the human host. The oral microbe she studies, *Porphyromonas gingivalis*, is a nasty bug that gangs up with *Actinobacillus actinomycetemcomitans* to invade the oral cavity, destroying gum and bone tissues leading to the inflamed, bleeding gums and tooth loss of periodontal disease.

Her work with *P. gingivalis* was recognized this year by the International Association of Dental Research with the Distinguished Scientist Award for Basic Research in Periodontal Disease. The bacteria's cell-dissolving bent apparently makes it possible for it to breach the barriers separating oral tissues from the bloodstream. The presence of these oral pathogens as an infection of blood vessel tissues seems to contribute to the build-up and instability of arterial plaque, leading to heart attack and stroke.



Progulske-Fox



***P. gingivalis* bacteria, the small structures in the upper right quadrant of the image above, attach to and invade an arterial cell. Once within the cellular cytoplasm, the bacteria allow the cell's digestive vesicles to enclose them, hi-jacking the cell's own digestive processes to thrive parasitically while camouflaged from the cell's defensive mechanisms.**

Progulske-Fox's lab found both live *P. gingivalis* and *A. actinomycetemcomitans* bacteria in human arterial plaque.

"Our finding is important because it has proved there are live periodontal bacteria in human atherosclerotic tissue," said Progulske-Fox. "Now we can begin to understand how these bacteria contribute to the disease process."

Because of the strong association between periodontal and cardiovascular diseases, scientists have postulated for years that oral pathogens contribute to arterial damage that leads to heart attack or stroke. In fact, a recent landmark study conducted elsewhere found a direct correlation between the amount of periodontal bacteria in the mouth and the formation of blockages in the carotid artery in the neck.

To reach the circulatory system, the bacteria have to breach the barrier between tissues in the mouth and the bloodstream, Progulske-Fox said. For patients with periodontal disease, whose gums are inflamed and bleed easily, bristles from even the softest toothbrush can tear tiny blood vessels in the compromised gum tissues, leaving the door wide open for bacteria to enter.

But could the bacteria elude the body's protective immune response once within the bloodstream?

Researchers worldwide have sought to empirically nab oral bacteria — dead or alive — in atherosclerotic tissues. They have found remnants of bacterial DNA in arteries, signaling that bacteria had entered the bloodstream. Yet scientists have never

been able to grow periodontal bacteria isolated from arterial plaque in Petri dishes, even though the same species of bacteria swabbed from oral plaque can be cultured that way. Therefore, researchers could not be sure the DNA was from bacterial trespassers destroyed by the immune system in the bloodstream, or if live bacteria were actually directly involved in plaque formation within the vessel walls.

"It makes sense that those periodontal bacteria most invasive in the mouth could be able to adapt to the vascular situation," said study project leader Emil Kozarov, Ph.D., an adjunct associate professor of oral biology at UF and a faculty member at Nova Southeastern University.

Probably only a handful of periodontal bacteria have been successful in making the jump of being infectious to both the oral and vascular tissues. Identifying these bacteria would give researchers the inside scoop on how the bacteria may contribute to cardiovascular disease, said Kozarov.

To find them, Progulske-Fox's team took the unusual approach of attempting to grow bacteria from arterial plaque directly on human artery cells. They obtained a section of a diseased carotid artery from a 74-year-old, partially toothless male patient undergoing surgery to remove an 80 percent blockage at Shands at UF in Gainesville. After removal, the sample was rinsed and placed on ice, then rushed to Progulske-Fox's nearby lab in a sealed, sterile container.

Within six hours of leaving the operating room, researchers pureed plaque from the artery and set it to incubate in a brew of healthy arterial cells and liquid growth medium. After 24 hours,

the cells were separated from the slurry in the flask, washed several times, then subjected to a series of fluorescent baths containing antibodies sensitive to *P. gingivalis* and *A. actinomycetemcomitans* bacteria.

Finally, the cells were fixed to a glass slide and placed under a microscope to search for the presence of invasive periodontal bacteria within the cell structures. If any of the artery cells were infected with the bacteria, fluorescent antibodies would light them up like Alcatraz in lockdown.

Progulske-Fox and her team found the endothelial cells were infected with both *P. gingivalis* and *A. actinomycetemcomitans*, proving live bacteria had been present in the atherosclerotic plaque.

"This report certainly provides a smoking gun that live bacteria have become seeded from the oral cavity to become inhabitants of the vessel wall," said Steve Offenbacher, D.D.S., Ph.D., distinguished professor of periodontology at the University of North Carolina at Chapel Hill School of Dentistry. "The exciting implications focus on the known ability of these bacteria to destroy connective tissue in the mouth, suggesting that when infecting the vessel wall they may contribute to the instability of the atherosclerotic plaque — leading to acute events such as heart attack or stroke."

Progulske-Fox plans to study atherosclerotic tissue samples from 50 to 60 more patients to better understand how bacteria infect arterial cells. She suspects some strains of the bacteria may be more successful in breaching the barriers separating oral tissues from the bloodstream. These bad bugs would become "most wanted" in the fight against periodontal and cardiovascular disease.

"More study samples will show us which strains are implicated in the disease process, so we can design simple diagnostic technology that could be used in a dental office to identify specific bacteria the patient is carrying and whether that bacteria is known to cause atherosclerotic disease," said Progulske-Fox.

Progulske-Fox is now collaborating with investigators in the College of Medicine's department of neurosurgery to understand how the bacteria contribute to cardiovascular disease, and to examine whether the infection may also play a role in weakening vessel walls leading to brain aneurysms.

She's also working with researchers at the University of Carolina at Chapel Hill to understand the link between periodontal disease and premature birth and low birth weight, which are seven times more common for babies born to women infected with periodontal disease.

She envisions diagnostic tests would be the first step in the war against periodontal and cardiovascular diseases, eventually leading to the development of a vaccine that would prevent oral bacteria from ever gaining a stronghold in the mouth. Antibiotic or antimicrobial treatments that could kill the bacteria after they have entered the circulatory system might also someday be possible.

For now, however, she advises people to practice good oral hygiene.

"It is important for these patients to have very good dental hygiene," said Progulske-Fox, "because losing a tooth may not be a big deal to some people, but it has the potential to become a life-threatening situation." ♦

Fish Out Of Water?

Cells can live without molecules once considered essential

BY LINDY MCCOLLUM-BROUNLEY

Leave it to the bacteria that cause tooth decay to be able to live without something all cells were thought to require.

Scientists have long believed a certain biochemical pathway involved in the folding and delivery of proteins to cell membranes is essential for survival. Now University of Florida researchers have discovered that *Streptococcus mutans*, the decay-causing organism that thrives in many a mouth, can do just fine without it.

The findings, reported in last December's *Proceedings of the National Academy of Sciences*, have rocked the cellular biology scientific community, which has long considered the pathway to be crucial. The report may also explain why the bacteria can survive in the harsh acidic environment they create in the mouth.

"We were met with skepticism ... because the dogma was that this biochemical pathway is key for all living cells," said study investigator Jeannine Brady, Ph.D., an associate professor of oral biology at the UF College of Dentistry. "As far as we know, this is the first example of any bacteria that can cope without this pathway; all of the existing literature indicated it is vital."

The signal recognition particle, or SRP, pathway is a primary mechanism by which proteins are chaperoned from cellular assembly lines, where they are made, to the protective outer surface of the cells, where they are inserted. Without a steady infusion of proteins, the membrane weakens and the cell — in this case, a bacterium — becomes unable to protect itself from harsh environmental conditions.

In the human mouth, its natural environment, it is typically *S. mutans* that goes on the attack. When sugary foods are eaten, the *S. mutans* population explodes, excreting lactic acid as it digests sugar. The acid makes life difficult for other helpful bacteria and demineralizes tooth enamel, causing decay.

According to the U.S. Centers for Disease Control and Prevention, 95 percent of adult Americans suffer from tooth decay. Considered by the U.S. surgeon general to be a "silent epidemic," tooth decay is a chronic childhood disease that affects five times more children than asthma and is estimated to result in 51 million lost school hours.

In an effort to understand how best to combat the tooth-decaying properties of *S. mutans*, Brady and her team set out to learn how the organism was able to survive its own acid. To find out, the researchers tinkered with systematically turning off several genes, individually and in combination, to see how the bacteria responded.

"We found *S. mutans* can survive, with normal growth, without the SRP pathway," said Adnan

Hasona, Ph.D., a research assistant professor of oral biology and the study's lead author.

The bacteria altered to lack SRP components were able to adapt and survive gradual increases in acid resulting from their own metabolism, suggesting a backup pathway was in place.

But, like goldfish dropped in new water, the altered bacteria could not contend with sudden environmental change. When artificially shocked with acid to a pH below that where tooth demineralization begins, the altered bacteria became sick and unable to grow. Shocking the bacteria with other environmental stressors, such as high salt levels or the presence of hydrogen peroxide, also caused them to weaken, Hasona said.

"So, at least in this organism, we learned the SRP pathway seems to enable it to respond rapidly

to environmental stress, but it was not at all necessary for the organism's viability during non-stress conditions," Brady said.

Brady's team surmised that two other molecules, called YidC1 and YidC2, might be acting as alternate routes for protein delivery in the absence of the SRP pathway. They tested their hypothesis and found that *S. mutans* could continue to function in non-stress conditions without the SRP

and YidC1 genes, but not without the YidC2 and SRP simultaneously.

"The fact that the bacteria could survive without the SRP pathway was the most striking finding for scientists in the membrane protein insertion field," said Ross E. Dalbey, Ph.D., a professor of chemistry at The Ohio State University. "The big question now is discovering how these proteins are targeted in the absence of the SRP pathway, and I think that will be an important area of future research."

Dalbey said the YidC2 and the SRP pathway could become targets in fighting tooth decay because they have been shown to enable *S. mutans* to grow in acidic conditions. Additionally, the YidC molecule has been demonstrated to be important to bacterial virulence and growth and has the potential to become a target in fighting infectious diseases, he said.

"Really, we started with a very basic question related primarily to *S. mutans*, 'how does this bacteria tolerate acid?'" said Brady. "Asking that question has opened the door much more widely to learning things that are more fundamental about how living organisms insert proteins and how membrane function is determined by proteins."

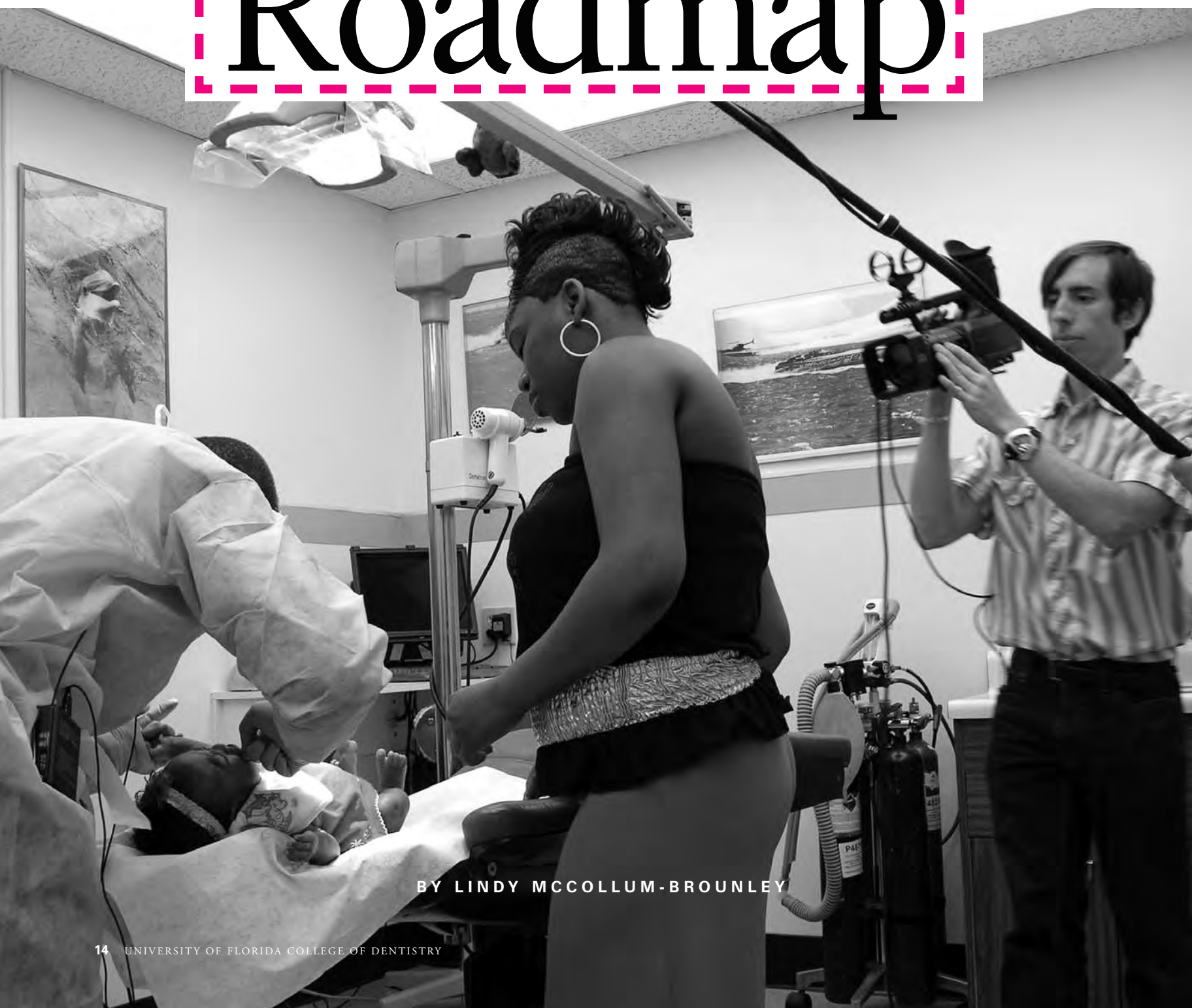
"We now know that things are not always as straightforward as they seem," she said.

The study was funded by the National Institutes of Health's National Institute of Dental and Craniofacial Research. ♦

But, like goldfish dropped in new water, the altered bacteria could not contend with sudden environmental change.

UF Craniofacial Center offers parents an ...

Emotional Roadmap



BY LINDY MCCOLLUM-BROUNLEY

The families of one of every 700 children born in the United States face the challenge of coping with their newborn's cleft lip and/or palate. It can be a distressing experience as parents are confronted with problems with nursing, worry for the child's future and feelings of guilt — that maybe they, as parents, are the cause of the deformity.

Fortunately for many, the defect of cleft lip can be diagnosed using ultrasound before birth, allowing parents to make necessary medical arrangements and to prepare themselves emotionally for the birth of their baby. Even when an ultrasound exam doesn't reveal the anomaly, parents of children born with cleft lip and/or palate can quickly place a healthy perspective on their baby's deformity when they know what to expect next.

"Parents often are overwhelmed when they first learn of their child's cleft lip and/or palate," said William Williams, Ph.D., a professor and director of the UF Craniofacial Center. "The value of introducing these new parents to other parents who have gone through the process is remarkable."

The UF Craniofacial Center, under contract with the Department of Health's Children's Medical Services, has developed the statewide Cleft Lip and Craniofacial Network. Network coordinators counsel parents of babies with cleft lip and/or palate and provide specialized bottles and nipples to make nursing easier. More importantly, network coordinators introduce new parents of babies with cleft lip and/or palate to other parents who have already gone through the repair process.

"It matters little that the physician tells the parent that cleft lip and/or palate is one of the most common birth defects worldwide," said Williams. "But, when they meet the average mom and dad who have already gone through the process, you can hear an audible sigh of relief."

Williams noted that UF's Craniofacial Center is taking parental education a step further. The Center is developing a documentary on the interdisciplinary approach in correcting cleft lip and palate and in providing a broad range of services including speech therapy, hearing assessment, and psychological counseling for children and their families. The DVD will be available as an educational resource for parents, distributed nationwide through the offices of craniofacial teams, pediatricians and obstetricians.

When searching for a talented documentarian to take on the project, Williams didn't have far to look. Tim Nackashi, 33, son of professor of medicine and Chief of General Pediatrics John Nackashi, won acclaim in 2004 for his and partner David Sampliner's Sundance Film Festival and Atlanta Film Festival Best Documentary Feature Award winning production, "Dirty Work." (www.dirtyworkdoc.com) Nackashi's experience in creating a documentary combined with his sensitivity to his father's life's work made him a natural choice.

Tim Nackashi focuses his lens on the work of pediatric dentist Abi Adewumi as she adjusts the palate prosthesis of little De'Laya Mosley. De'Laya's mother, Chiquita Mosley, looks on and Nackashi's mother, Bryan Nackashi, pitches-in as sound boom operator.

"Growing up, I saw a lot of my dad's work and connected with it," said Nackashi. "I had expressed interest in doing health-related pieces, and the craniofacial team expressed the need to create a piece that could be a great support tool for families who are in the early stages of receiving news that their child will have or was just born with a cleft lip and palate."

"The families, in many cases, aren't used to spending much time in a hospital or interacting very much with doctors, so there are a lot of questions that arrive around, 'What is my child going to look like,' 'What if I'm afraid of how my baby looks,' 'How will I feed my baby' and on and on," said Nackashi. "Obviously, the idea is to create a piece that can, in some way, address all of these issues."

Nackashi decided to share the real-life stories of patients and their families as they progress through the different stages of cleft lip and palate repair, from the early challenges of infancy to the end result of a happy and normal young adult. But he would delve into deeper territory than the cold, clinical timeline of surgeries, therapies and various other medical aspects of the process.

"I wanted to focus more on what to expect emotionally, and how to think about some of those things emotionally that are going to be happening with your baby as he or she goes through the process of rehabilitation," he said.

To do that, Nackashi interviewed the entire cleft palate team at Wolfson Hospital in Jacksonville, Fla. and doctors, dentists and speech pathologists affiliated with the UF Craniofacial Center and Children's Medical Services in Gainesville.

More important to his "emotional roadmap" theme, Nackashi also interviewed and documented the experiences of several patients and their families during different stages of rehabilitation.

"I filmed and interviewed a great number of the craniofacial team members, and I'm very much aware that it's a strong collaborative process across disciplines," Nackashi said. "But, this is still a piece that in the greater sense is about the resiliency of children. Children can overcome incredible odds and obstacles."

"With the right support, and if you'll just let them, they can actually lead you through the process," he said.

For more information about the University of Florida Craniofacial Center, please visit www.cleft.ufl.edu ♦

Putting down roots

3D imaging keeps computerized implant navigation on course

BY LINDY MCCOLLUM-BROUNLEY

Implant dentistry is a young field with its foundations in cutting-edge prosthodontic and surgical techniques buttressed by technology. Dental implant teams wield enormous expertise, manual dexterity and creative thinking when planning, placing and restoring dental implants, often breaking new ground in territory others fear to tread. Yet that territory is becoming a landscape more easily navigated.

"I think the trends in dentistry are really enhanced through access to three-dimensional imagery," said William C. Martin, D.M.D., M.S., clinical director of UF's Center for Implant Dentistry. "Implant navigation and guidance offer the ability to merge the 3D information from a CT scan into the restoration-driven planning frame of the therapy allowing the implant surgeon to achieve the ideal positioning of the implant with extreme accuracy."

Martin should know. UF was the first university in the United States to receive the IGI Implant Navigation System, donated fall of 2004 by the Israeli company, DenX. DenX also partnered with Center for Implant Dentistry sponsor, Straumann US, to arrange for a cone beam computed tomography (CBCT) unit to be installed in the college's radiology suite this January, further augmenting the center's clinical treatment and research enterprise. (Read more about CBCT on page 18.)

The two technologies combined represent the state-of-the-art equipment in implant surgery, and they're keeping UF's Center for Implant Dentistry close to its roots as an innovative trendsetter. Established in 1999 through collaboration with Straumann AG, the International Team for Oral Implantology (ITI) and the UF College of Dentistry, the center was the first of its kind in the world — designed to be an interdisciplinary ground zero for the creative exploration of dental implant surgery, research and education.

"The computer-aided implant navigation system affords us the ability to treat those more complex patients that may have anatomical variances that make surgery difficult, whether a nerve is really close to where you want to put the implant or whether you need to negotiate around a sinus or another tooth," said Martin.

The IGI system software enables the implant team to create a treatment plan using 3D CT images, and then facilitates real time navigation during surgery, greatly enhancing predictability and



Dr. Emma Lewis, an assistant professor of oral and maxillofacial surgery, watches the on screen progress of an implant surgery as surgical dental assistant Deanna Hardee assists and Dr. Will Martin observes. The implant navigation system combines CT imaging, software and motion tracking technology (note the sensors on the hand-piece and patient tracker at right) to monitor the surgical drill's exact position, angle and depth in real time.



accuracy of implant placement, often without the need to reflect the gum tissue away from the bone.

"In certain situations, the system affords us the ability to make a small punch incision in the gum tissue prior to placing the implant, which puts the patient through less post-operative morbidity," said Martin. "In previous situations, we would have to broadly reflect the gum tissue to assist in visualization the bone."

This dramatic decrease in surgical trauma to the patient's soft tissue makes for faster, less-painful recovery.

That doesn't mean all patients are candidates for computer-aided navigation, nor all dentists candidates for implant surgeons.

"This technology and all other technology that utilizes computers to aid in providing care is not to be misinterpreted with technology that will allow just anyone to do the procedures," Martin said.

"When you're dealing with dental implants you're dealing with a surgical situation with the potential for medical complications or emergencies, so the

clinician behind the technology should be formally trained in implant surgery."

Conversely, the technology may not be a good fit for all implant surgeons.

Martin said the popularity of computer aided implant navigation and other technologies will be based on the access to 3D imaging, but also to the individual surgeon's comfort level using new technologies.

"What you're going to see is our younger generation, the PlayStation generation, walking right into it with no problem," said Martin. "Our future dentists three to five years down the road, and I think it will be that soon, will have easy access to three-dimensional imaging much more than we do today."

"They'll also be far more comfortable and familiar with using digital technology in general. For them, it'll be a piece of cake," he said. ●



Boyd Robinson

Boyd Robinson, D.D.S., M.Ed., is a man on a mission. Recently appointed as dentistry's associate dean for clinical affairs, Robinson now captains the college's clinical enterprise statewide, in Gainesville and at community-based UF dental programs located in Hialeah, Apopka, Seminole and Jacksonville.

His first assignment is working with dental administration and faculty to streamline the student dental program's clinical processes to improve patient care and student learning — a goal with no easy answers and many operational complexities.

Robinson, a retired Navy captain, has extensive clinical and administrative expertise gained from a 26-year military career that provided a rich and varied professional experience at the highest levels of executive leadership in Naval dentistry. In the Navy, he served as director of clinics, centers and programs; managed annual budgets in excess of \$4 million; and was responsible for dental services for nearly 30,000 active-duty Navy personnel. He also advised the Surgeon General of the Navy on dental affairs and was dentist to U.S. presidents Ronald Reagan and George Bush Sr.

Robinson's no Pogy Bait (Navy slang for an inexperienced sailor) when it comes to clinical administration.

During the college's nationwide search for a clinical dean, his vision of what dentistry's comprehensive patient care goal should be resulted in college faculty selecting him, a dark horse internal candidate, as the landslide choice.

"Screening and treatment planning are important areas because they're the first contact patients have with our school," said Robinson. "We're going to standardize treatment planning, so that all the faculty are calibrated, and specialty faculty will also rotate in the clinic so that treatment planning is more thorough and uniform.

This will be good for the patient, but it will also be good for our students, who rely on treatment planning to provide them with the patients they need to navigate our curriculum."

Fully embracing the recommendations of the college's Multidisciplinary Treatment Planning Clinic Workgroup, Robinson will be a catalyst for change in every aspect of the college's student clinic operations. He not only will oversee reorganization of the treatment planning and screening clinics for the D.M.D. program but also will develop a new interim care clinic to treat comprehensive care patients suffering from immediate dental problems. He's considering installation of innovative self-screening measures which include an incoming call screening system, a pre-screening kiosk placed in the West Entrance dental lobby for online walk-in patient pre-screening, and a patient screening "Web wizard" to provide online access and submission of computerized screening forms.

He has his own ideas about improving student learning experiences.

"The big plan I have, and this will take some time, is to drive the clinical experience for students down so that freshmen dental students begin their clinical experience by the second semester of dental school," said Robinson.

Early introduction of clinical experience in dental education is a nationwide trend dentistry Dean Teresa Dolan, D.D.S., M.P.H., would like to see at UF.

"Many leading dental schools are modifying their curriculums to introduce clinical experiences in the first two semesters of dental school,"

said Dolan. "I strongly endorse Dr. Robinson's efforts to lead the faculty to create a contemporary, clinically relevant dental curriculum with one of the goals being earlier introduction of clinical experience."

Robinson is convinced early clinical experience will dramatically improve student learning and retention.

"Much of the didactic pre-teaching we give students during the first and second year of dental school is so far removed from the actual clinical experience that they just don't remember it by the time they get into the clinics," Robinson said. "I would like to see first-year students in the screening clinic taking patient histories. They may not

understand all of the history; for instance, they may not understand all of the pharmacology because they haven't been taught that yet. But it will at least plant questions in their minds so that they can make those connections when they are taught it."

Robinson's hands-on style will help with these necessary transitions, but he's quick to acknowledge the importance of staff and faculty involvement.

"I don't do anything in a vacuum; this is nothing I can do by myself," said Robinson. "I'm not autocratic, I'm more of a democratic coach. I have to empower people, set up teams that work and say to people, 'I want you to teach me your business, and I want you to define what your role is in the school.'"

"Through that definition, I think we're going to find a lot of good stuff, because people are trying to do a good job." ♦

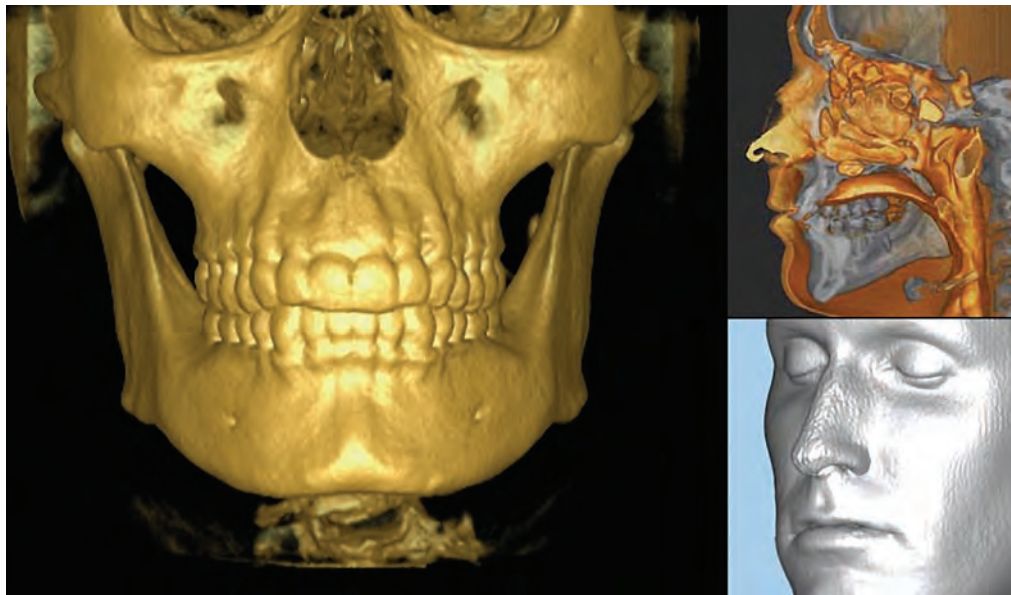
Former Navy captain and dentist to two U.S. presidents sails full steam ahead as dentistry's new associate dean for clinical affairs.

CLINICAL

Adapting to the digital age

Dental Radiography gets in-sync with the times

BY LINDY MCCOLLUM-BROUNLEY



German physics professor Wilhelm Conrad Roentgen discovered X-rays by chance in November of 1895 while conducting experiments using a cathode ray tube.

Roentgen's interest in the tube was to study fluorescent light generated by electricity. What he discovered instead was that the tube's invisible rays, which he called "X-rays," had the ability to make some, but not all, solid objects seem transparent when recorded on photographic plates. One can imagine Roentgen scouring his laboratory for objects to test the power of his new X-rays — books, coins and, eventually, his wife Anna's hand.

When Roentgen developed the film plate on which the image of Anna's hand had been recorded, the X-ray revealed clearly defined and delicate bones encased in a ghostly shadow of flesh, the third finger adorned by the black shadow of a ring.

It was the first X-ray image of human anatomy, and, as crude as it was, it set off a cascading chain of scientific and medical advancement unimaginable by its inventor.

Modern X-ray technology, or radiography, has come a long way since Roentgen's discovery. X-rays for dental purposes, known as oral and maxillofacial radiology, was accepted by the American Dental Association as a recognized specialty in 1999 and has long been a fixture of dental practice — yet dental imaging has transformed in terms of technology just in the last few years.

"Oral and maxillofacial radiology may be seen

The CBCT produces 3-dimensional images of skeletal structures and soft tissue.

as a service area as it has been in the past, where radiographs would be acquired based on a dentist's prescription, much like a lab service," said Madhu Nair, D.M.D., Ph.D., an associate professor of oral and maxillofacial surgery and diagnostic sciences. "But that has changed with the increased use of advanced imaging modalities such as CT and MRI.

"More complex procedures are now routinely done by dentists and dental specialists, with radiologists providing specialized expertise in digital processing and interpretation of the images," Nair said.

Increasingly sophisticated oral, head and neck surgeries, and other nonsurgical procedures have made the immediacy and flexibility of digital radiography a crucial tool for dental providers. Likewise, staying at the forefront of cutting-edge technology is crucial to the College of Dentistry's dental education and patient service missions.

Recognizing that and with help from a \$2 million U.S. Human Resources and Services Administration grant, the college is bringing its clinics into the digital age with installation of digital radiography enterprisewide. The college also received a donation through its Implant Center, which enabled integration of cone beam computed tomography, or CBCT, in the division of oral and

maxillofacial radiology earlier this year.

Digital radiography, which is rapidly gaining acceptance across the globe, does away with traditional radiographic film and light boxes. It takes advantage of sophisticated software and electronic sensor technology to capture radiographic images, which are stored on secure college servers.

Radiation doses are usually comparable or lower with digital radiography than with film-based radiography, but digital images can be enhanced with software when they are less than perfect, further reducing the radiation dose sustained during re-takes. Once the images are captured, they become part of the patient's electronic chart, easily shared among departments, clinics and specialists for increased efficiency in patient care.

CBCT is another exciting addition to the college's imaging capabilities. It uses cone beam technology to scan the head and neck region; then the software reconstructs the "slice" data as well as 3-D images that can be explored inside out on the computer screen.

"The CBCT is going to enhance patient service because it's convenient and gives us CT capability in-house," said James Pettigrew Jr., D.M.D., an associate professor and division head of oral and maxillofacial radiology. "We've been referring patients to Shands for CT scans, and we will continue to do that for contrasted studies (where dye is injected) and those more difficult studies needing medical grade images."

Head and neck scans, or studies, produced by CBCT imaging are acquired at a fraction of the radiation dose delivered during a regular, medical-grade CT scan.

CBCT reconstructs soft tissue as well as bone and can drill down to very specific areas with ease, usually with quality of detail necessary for radiologists to clearly identify certain dental or maxillofacial diseases and conditions. The images are useful for orthodontics, implant imaging, presurgical planning for implants, maxillofacial trauma and infections, some dental tumors and diseases, and any other malady within the scope of den-

tistry and oral and maxillofacial surgery.

CBCT and digital radiography are very different imaging technologies, but they share a common outcome of improved patient care through detailed dental imaging and electronic access to the digital images they produce.

There's no doubt that dental imaging has advanced into a digital age filled with possibilities for the future. One wonders if Roentgen would be all that surprised. ♦

"The CBCT is going to enhance patient service because it's convenient and gives us CT capability in-house."

Aesthetic dentistry

This isn't your father's dentistry anymore.... or is it?

BY LINDY MCCOLLUM-BROUNLEY

Chances are you've seen television shows like "Extreme Makeover" and "The Swan," and have been amazed by the transformations people experience when their smiles are made over. Men and women who haven't smiled in years — embarrassed by teeth made unsightly due to decay, crookedness, or discoloration — suddenly can't keep themselves from grinning ear to ear, flashing beautiful, pearly whites at the camera for the viewing pleasure of the folks at home.

These shows, regardless of whether they give shallow treatment to the complex dental procedures completed to make those smiles happen, have gone a long way to highlight just how much dentistry has changed. A profession once perceived as not having evolved much since the era of automotive tail fins and "Look ma! No cavities!" has suddenly caught the public's fancy and is increasingly known for delivering good oral health and appealing aesthetics through the use of cutting-edge equipment, materials and procedures.

Makeover wannabees are not the only ones who have taken note.

"Our students are extremely aware of aesthetic dentistry," said Amer Abu-Hanna, D.D.S., M.S., an assistant professor of operative dentistry at the UF College of Dentistry. "The demand from students to do aesthetic procedures has increased dramatically. They are very aware this is something current in dental practice and that they will be doing it after they graduate."

Ironically, many high-tech aesthetic dentistry techniques have been around for years, and, despite



Dr. Mark Davis demonstrates using the CEREC CAD/CAM software to mark the margins of the tooth structure to receive the ceramic crown. The optical impression of the tooth structure is captured using an intra-oral imaging wand, which renders a 3-dimensional image that can be rotated in any direction on screen. The CAD file serves as a digital template for the crown, which will be custom fabricated in the milling compartment on the counter to the right.

the recent public interest, these methods aren't necessarily at odds with established dental practice, where maintaining healthy teeth naturally results in a more attractive smile.

For instance, restoring teeth using tooth-colored composite for filling cavities, gaps and fractured teeth has been routine dental practice for decades. The composite is long-lived, comes in different shades to match most any tooth color and leaves teeth looking completely natural.

"We teach our students how to do direct composite veneers (in the Preclinical Simulation Laboratory), including how to prepare the tooth and fabricate the veneer themselves," said Abu-Hanna. "The posterior composites are also considered aesthetic restoration, and our students are doing more and more of them because many patients are electing not to use amalgams. It takes a lot of artistry to build the tooth up to match the shade and anatomy of the natural tooth... It takes practice."

Dental students are also learning to use the two CEREC 3D computerized milling systems recently installed in college clinics. The CEREC 3D has become common in dental practice, which uses its sophisticated imaging capture and modeling software and diamond milling burs to fabricate ceramic crowns, inlays and onlays.

"Whatever is missing, you can design a filling for it and the machine will mill it," said Abu-Hanna. "CEREC uses a digital camera to capture an optical

impression, a multidimensional picture of the tooth structure that is accurate within microns."

The optical impression is displayed on the CEREC screen, and the practitioner uses the cursor to define the tooth margins. Next, appropriate tooth anatomy for the crown, inlay or onlay is selected from the CEREC databases to match the anatomy of the teeth surrounding the placement. Width, height and size can be fine-tuned on screen.

Once satisfied with the restoration design, the dentist transmits the digital file to the self-contained milling unit. A perfect, customized restoration is milled from a block of ceramic or composite resin in about 10 minutes, and the patient can go home with a permanent crown in one visit of a couple of hours.

"Currently, we have three faculty teaching CEREC: myself, Dr. Mark Davis and Dr. Marc Ottenga," said Abu-Hanna.

Time with these faculty members for personal instruction in clinic can be reserved by students, and a sign-up sheet is posted to reserve two half-day slots available during the week. The sign-up sheet is full through summer.

"I think aesthetic dentistry will become a core, important part of our curriculum as the demand from students to learn these procedures grows," said Abu-Hanna. "They want to learn it here in school because they know it's used out there very successfully in private practice." ♦

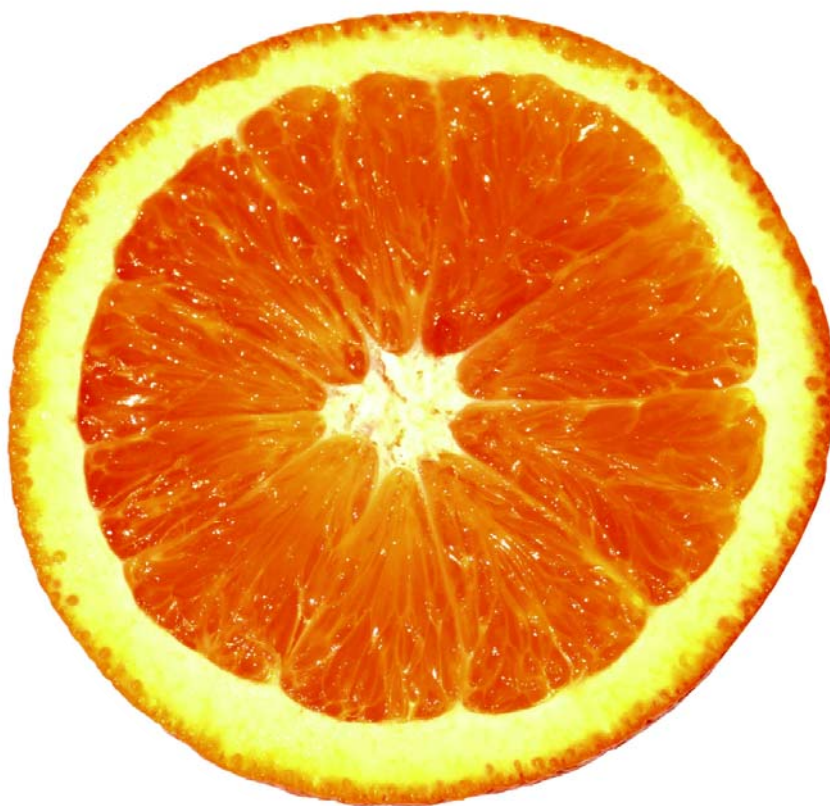


The old amalgam filling has been removed in preparation to receive the CEREC-milled ceramic inlay.



Dr. Linda Bartoshuk (above) discovered that a quarter of the population, dubbed supertasters, has an unusually high number of taste buds. Here, a microscopic image, seen in the background, reveals a close-up view of graduate student Derek Snyder's tongue. Blue food coloring swabbed on the tongue makes it easier to see the tiny structures that house taste buds.

THE NEW SUPERPOWER TASTE



Linda Bartoshuk, a world-renowned researcher,
joins UF's effort to treat taste and smell disorders

BY JILL PEASE AND JOHN PASTOR



In Linda Bartoshuk's world there *is* accounting for taste. With a simple test, Bartoshuk can measure the number of taste buds a person has and classify them as supertasters, medium tasters or nontasters.

When supertasters place the small filter paper saturated with a chemical called 6-n-propylthiouracil, or PROP, in their mouths, they taste an intense bitterness. Nontasters taste nothing and medium tasters are somewhere in between.

But beyond explaining why for some people coffee is too bitter to tolerate (supertaster) or why some people can't get enough of four-alarm chili (nontaster), Bartoshuk's work has implications for the treatment of taste disorders.

Now a newly launched clinical service of UF McKnight Brain Institute's Center for Smell and Taste joins only a handful of such clinics in the

buds equals more pain nerves, causing supertasters to experience three times the burn that nontasters experience."

Bartoshuk was the first to discover that burning mouth syndrome, a condition predominantly experienced by postmenopausal women, is caused by damage to the taste buds at the front of the tongue and is not a psychosomatic condition, as many believed. She joins College of Dentistry faculty members Donald Cohen, D.M.D., Frank Catalanotto, D.M.D., and Carol Stewart, D.D.S., in developing effective treatments for the disorder.

Working with Patrick Antonelli, M.D., chairman of the department of otolaryngology in the College of Medicine, Bartoshuk and her graduate student Derek Snyder are also studying a particular nerve that runs from the tongue and through the middle ear on its way to the brain. They have found

Beyond explaining why for some people coffee is too bitter (supertaster) or why some people can't get

United States. Housed in the College of Dentistry, the clinic is the only one in the Southeast to treat chemosensory disorders, which affect approximately 2 million Americans.

"There are enormous numbers of people who walk around with smell and taste disorders," said the center's director Barry Ache, Ph.D., who studies the biological chain of events that allows the brain to process odors. "These problems may be considered minor by others, but these disorders are debilitating for the people who have them."

'NEON TASTE WORLD'

Bartoshuk, who recently joined the UF faculty, first as a visiting professor in the College of Public Health and Health Professions, and now permanently as a presidential endowed professor in the College of Dentistry, began exploring genetic variations in taste perception in the 1970s. She describes supertasters as living in a "neon taste world," experiencing three times the sensation of bitterness, sweetness or spiciness in foods compared with non-tasters.

Twenty-five percent of the population are supertasters, 25 percent are nontasters and 50 percent fall into the medium taster category.

"Your taster status not only influences your food choices, but it also affects your health," said Bartoshuk, a member of the prestigious National Academy of Sciences and the first female academy member at UF.

Supertasters are less drawn to sweets and fatty foods, which explains why they have superior cardiovascular profiles and tend to be thinner than nontasters. But they are less likely to eat bitter green vegetables, putting them at increased risk for colon cancer.

"Supertasters are also more susceptible to oral pain," Bartoshuk said. "Because each taste bud is surrounded by a basket of pain nerves, more taste

that when this nerve is damaged, either by injury or chronic ear infections, taste sensation is impaired.

"Dr. Bartoshuk's research in the area of taste disorders and oral pain is extremely well-known and well-regarded among her colleagues," said UF President Bernie Machen. "Her work with 'supertasters' is especially intriguing and speaks to the innovative approach she takes in her work. UF is fortunate to have someone the caliber of Dr. Bartoshuk in our midst. The university will gain immensely from her presence on the faculty."

A PLACE TO GO FOR HELP

Patients with taste and smell disorders in the Southeast also stand to benefit from the work of Bartoshuk and others associated with the center, including Catalanotto, the center's clinical director and director of the new Smell and Taste Clinic, who was one of many people instrumental in attracting Bartoshuk to UF and establishing the clinical initiative.

Many of the patients, especially those with smell disorders, will have ear, nose and throat problems, such as nasal sinus disease, nasal polyps, or congestion caused by allergies, said Catalanotto, adding that these patients will also be evaluated by Savita Collins, M.D., a UF ear, nose and throat surgeon.

"We will also hear from patients who have had some head trauma," said Catalanotto, a professor in the College of Dentistry's department of community dentistry and behavioral sciences. "Rarer will be patients with a true taste complaint of unknown origin."

"Taste and smell problems are poorly understood by the health-care community," he added. "Our role is to better understand these problems, counsel patients on how to deal with these issues and look for effective



treatments. In addition, we believe that looking at taste and smell function in other systemic diseases can be helpful in understanding such diseases.”

People who want to know more about the UF Smell and Taste Clinic should call (352) 294-0199.

COMPLEX SENSES

The research component of the UF Center for Smell and Taste was created in 1998 to integrate and promote discovery, application and education in the chemical senses.

“Smell and taste deficits are often envisioned as subtle compared to vision deficits or hearing deficits — if you’re blind or deaf,” said Ache, a member of the advisory council of the National Institute on Deafness and Other

Everything a person eats must first pass the scrutiny of the nose and the taste buds and thus smell and taste may be complicit in many nutritional and eating disorders.”

An impaired sense of smell is one of the first signs of Alzheimer’s disease. In addition, diabetes, hypertension, malnutrition, Parkinson’s disease, multiple sclerosis, Korsakoff’s psychosis and even psychological disorders such as depression are all accompanied or signaled by chemosensory problems like smell disorders.

MECHANIZED NOSES

Imagine sitting in a kitchen. An open bottle of wine is on the table, steaks are broiling, onions are frying, and a fresh cut lawn is just outside the open

enough of four-alarm chili (non-taster), Bartoshuk’s work has implications for the treatment of taste disorders.

Communication Disorders. “But indeed, the quality of life is constrained significantly for people who can’t smell or taste.”

Among its research initiatives, the center is working with the department of psychology and College of Liberal Arts and Sciences to establish a national facility to assess smell and taste function in rodents, which is important in efforts to cure human diseases, especially considering that most mouse genes have a direct human counterpart.

Ultimately, the only way to understand the smell or taste capacities of animals is to study their behavior — whether a rat can be conditioned to press a lever after tasting a specific chemical stimulus, such as salt, for example.

“In order to understand the brain mechanisms underlying normal and abnormal smell and taste function, it is important to be able to manipulate the nervous system — genetically, pharmacologically, or anatomically — and then assess the perceptual consequences in the animal model,” said Alan Spector, Ph.D., professor of psychology and assistant director of the UF Center for Smell and Taste. “Because perception cannot be measured directly, it must be inferred by the animal’s performance on various smell and taste tasks. Using this approach we can learn about the smell and taste world of animals and link it to brain function.”

Eventually, the Chemosensory Test Facility is intended to give researchers throughout the world an opportunity to have animals, serving as models of disease, tested for their ability to smell and taste. Such experiments can contribute to developing treatments and management strategies for a multitude of disorders, obesity among them.

“Obesity is a problem in the United States,” Spector said. “A lot of different factors likely contribute to the disorder, among them smell and taste.

window. Using millions of receptor cells, our noses are able to detect subtle differences in smell in complex mixtures against equally complex backgrounds.

Imagine now trying to duplicate that process with technology.

The UF Center for Smell and Taste works with the Whitney Laboratory, the Interdisciplinary Center for Biotechnology and the colleges of Medicine, Engineering and Liberal Arts and Sciences to foster development of mechanical biosensors, also known as e-noses, to detect chemical substances.

The objective is the use of molecular recognition molecules such as olfactory receptor proteins immobilized on nano-scale surfaces to provide the sensing element of an electronic ‘nose on a chip’.

The initiative addresses a growing demand for chemical biosensors for clinical, industrial and defense applications. Chemical biosensors detect chemical signatures of compounds of interest, such as illicit drugs or explosives. In medical applications, biosensors may be created to detect so-called smell of disease, a phenomenon spoken of since Aristotle’s time. For example, there’s evidence certain cancers give off chemical signatures.

But the task to develop e-noses is formidable because an odor may be a single chemical or a mixture of hundreds to thousands of chemicals. Making that process even more complex, some chemicals may block the sensory detection of other chemicals.

More research will tell us how it all works. Just as there are super-tasters, there are people who have heightened senses of smell. Why that is, or whether the extraordinary smell and taste abilities are linked, are questions in need of answers.

Tasteful answers, of course. ♦

Congratulations

CLASS OF 2006

Commencement was held in the Phillips Center for Performing Arts May 26, when degrees and certificates were conferred on 78 D.M.D. students, 47 advanced and graduate education students and 12 internationally educated dentists.



1. 2006 graduates of the Internationally-Educated Dentist Program.

2. Introducing the University of Florida College of Dentistry Class of 2006.

3. Jeff Draude receives his doctoral hood from father Dr. Joseph Draude.

4. "I prepared for my speech today with a list of things to do... No. 1 on my 'to do' list: take picture of self." Nominated by the Class of 2006 as the keynote speaker, Dr. Hugh Wunderlich, shared his humorous, Jeff Foxworthy-like musings on, "You might be a UFCD grad *if*...." One of the crowd favorites was,

"You might be a UFCD grad *if* the mascot of your school has never worn pants." Dr. Wunderlich soon weighed-in on more serious issues. "Dentistry has a vacuum: it is access to care," he said, "You are the graduating Class of 2006. You are the best-trained dentists in the world. Be a hero in your world. Fill the vacuum."

5. Ana DeCastro gets a hug from dad during the commencement processional as Casey Bovio-Lepley looks on.

6. After Senior Vice President for Health Affairs Douglas Barrett conferred their degrees, dental D.M.D. graduates transferred their tassels

from the right to left side of their caps, signifying their transition from dental students to doctors of dental medicine.

7. Eman Ottallah and Nisrine Cabani relax before the commencement processional in the Performing Arts Center's "black box," a sound proofed room located stage left.

8. Academy of Alumni & Friends President Gregory Reddish (right), Senior Vice President of Health Affairs Douglas Barrett, and keynote speaker and Florida Dental Association editor, Dr. Hugh Wunderlich, are seated front and center in a position of honor.





2



6



7



8

Introducing the

CLASS OF 2009



Harold Acosta Imran Ahson Elizabeth Alfuentes Adam Barefoot Daniel Bass Kathleen Beazell Dale Benjamin Yejuda Benjamin Matt Billingsley



Kelly Bliss Carmen Brawley Nicholas Britten Todd Britten James Buckley Victor Bustos Courtney Caplin Dominick Catania Marissa Cooper



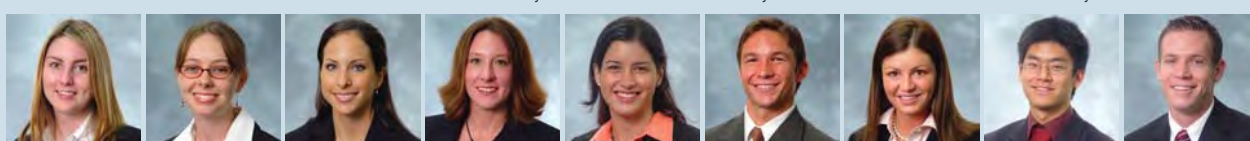
Michael Delucia Dafne Ellis Mark Farag Daisy Fatjo Naved Fatmi Robin Flicker Matthew Giunta Anne Green Vanisia Harris



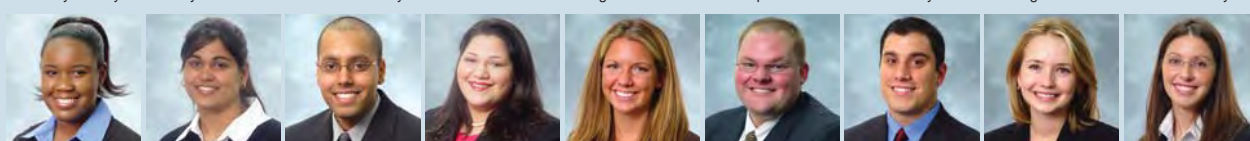
William Holland Timothy House Patrick Hoy Damien Hunter Long Huong Natalya Ivanova Julia Joh Sujin Ju Kirk Juhasz



Kristen Klement Rene Landa Vincent Leth Maureen Libby Adam Lincicum Amy Luce Mohni Malik Mark Maltby Makaela Manner



Ashley McCoy Kelly McKenna Rachel McNulty Cristen Mendoza Milagros Mendoza Christopher Osorio Tulin Ozyurt Jonghan Park Heath Parry



Sheena Pate Roshni Patel Viral Patel Monica Perez Lindsay Perkins David Pickett Carlos Piedra Anna Pyatigorskaya Nicole Quisenberry-Diaz



Sridevi Rajendran Maryam Rezaie David Rosen Phuongchi Sen Joanna Silver James Sims Mingsun Son Richard Spooner John Sullivan



Laura Tucker Jessica Tunstall Rachael Van Dyke Barbara Veloz Robert Weaver Emily Weldon Drew Whitford Richard Williams Barak Wray Vincent Yeung

Associate Dean for Admissions and Financial Aid Venita Sposetti speaks out on

5 things dentists need to know about today's dental admissions



1. Dental admission is not what it used to be.

Much has changed in dental admissions since the nadir of dental applications in the late 1980s and early '90s, when six dental schools were forced to close due, in part, to faltering enrollment. At UF, the number of dental applicants has more than doubled in the past three years, skyrocketing from nearly 650 in 2003 to more than 1,300 in 2006.

This isn't just a Florida phenomenon; it's a nationwide trend driven by lifestyle issues, a poor job market and the increasing prominence of dentistry as an important health profession *and* profitable business.

This high demand has made getting admitted into dental school more competitive than ever. Of the more than 1,300 applications made to UF's program in 2006, more than 300 applicants were invited for interviews by the college's Committee on Student Admissions and Recruitment. From these top applicants, only 82 can enroll in the school's D.M.D. program.

Last year, UF was, once again, one of the top three undergraduate feeder schools for dental applicants nationwide; many of these applicants want to attend dental school at UF. This burgeoning increase in applicants to dental school has created a highly competitive environment resulting in lots of angst, upset, frustration and even anger among dental applicants, the people who love them and the dentists who mentor them.

2. There is no "typical" dental school applicant.

The typical applicant to dental school is atypical. Traditionally, many applicants came from a dental family background — dad, mom or a close family friend was a dentist or worked in dentistry and inspired the applicant to choose dentistry as his or her own profession. Today, a broad range of people have become interested in dentistry as a career, and there are several factors that have emerged in the marketplace driving this trend.

One of them has to do with the current soft job market. Professional school enrollment tends to swing high when the job market swings low. Many new graduates with Bachelor's degrees who encounter a job market where they are unable to put their degrees to work at a salary in the range they expect choose to stay in school and earn an advanced degree.

Media coverage, as seen in TV shows like "Extreme Makeover" and "The Swan," of aesthetic and restorative procedures like implants, veneers and bleaching have touched a whole generation of potential dental applicants who don't know much about restorative dentistry but recognize its appeal. Other media attention, like that from *The Wall Street Journal*, which spotlighted the start up dental practice as one of the best returns on investment dollars. What better investment than in yourself?

Another factor in the upswing of dental applications comes from some practicing physicians. Individuals interested in a medical career sometimes come away from shadowing MDs discouraged by the present conditions prevalent in the medical profession.

Finally, lifestyle issues like having time for family and friends and a predictable working schedule are emerging as important factors to the "millennial" generation when choosing careers.

3. Potential dental students should apply early.

Successful applicants don't wait until deadline to submit their applications. They apply early; in May of 2006 we begin receiving applications for fall of 2007. That's more than a year in advance. We typically begin reviewing applications in July, and applicant interviews are held July through February. By March the class is filled and the application cycle is over.

If applicants don't investigate the applications process, or if they don't have mentors who understand the process and timeline, they'll start thinking about applying right around the application deadline, which is Dec. 1, and that is far too late to begin an application.

4. A little research goes a long way.

Although the Associated American Dental Schools Applications Service, or AADSAS, serves as the national clearinghouse for applications, not all dental schools are the same or use the same criteria, deadlines, timelines or processes for admissions. Find out how schools vary *in advance* of making application to avoid a delay in processing that has the potential to cost the applicant his or her place in the class.

Take advantage of the wonderful tool of the Internet. Applicants will find answers to most, if not all, admissions questions right online. Most of the 56 U.S. dental schools have a Web presence with detailed admissions information. Visit <http://www.adea.org> for a complete listing of dental schools, or AADSAS at <https://aadsas.adea.org> for online application information.

As part of the research process, it is critical applicants spend time shadowing a dentist. At UF, the first question applicants are typically asked during their interview is, "Why do you want to be a dentist?" A person's knowledge of the profession, his or her thought processes, self-awareness, and the validity of information he or she used to make a choice about pursuing the profession are really important to us. This is where practicing dentists can have a tremendous impact on the success of applications by opening their offices to interested potential students, allowing them access to direct information about what it's really like to be a dentist.

5. The UFCD Committee on Student Admissions and Recruitment is working hard for the students, the state and for you.

The goal of the Committee on Student Admissions and Recruitment is to admit the best-qualified students to serve the people of the state of Florida. We use a holistic evaluation process when reviewing applications to achieve that. It's not just about grades, GPAs and test scores. It's the whole person.

We evaluate the academic evidence in the applicant's portfolio to see that he or she has the foundation to be successful at the next level academically, that he or she can handle graduate work of 18 to 22 credit hours each semester in the sciences. We're also very interested in a person's knowledge of the profession and why the person wants to become a dentist.

We also want to see that individuals have successfully balanced the academic demands of their undergraduate curriculum with being a member of the world, to have distinguished themselves as members of their community. This can include having worked while in school to contribute to their families or their own support; it could mean the student has been involved in a research project and has had his or her work published; or it could encompass a meaningful role in a community service project.

The composition of the Committee on Student Admissions and Recruitment is defined in the bylaws of the constitution of the college's faculty assembly and represents a diverse group of individuals. Nine full-time faculty members are elected to serve by the faculty assembly. Three private dentists serve; two appointed by the dean, and one elected by the board of the Academy of Alumni & Friends. Three D.M.D. students also sit on the committee, one each elected by the members of the sophomore, junior and senior classes. The college's directors for student and multicultural affairs and the Internationally-Educated Dentist Program are also members of the committee. I, as assistant dean for admissions and financial aid, chair the committee.

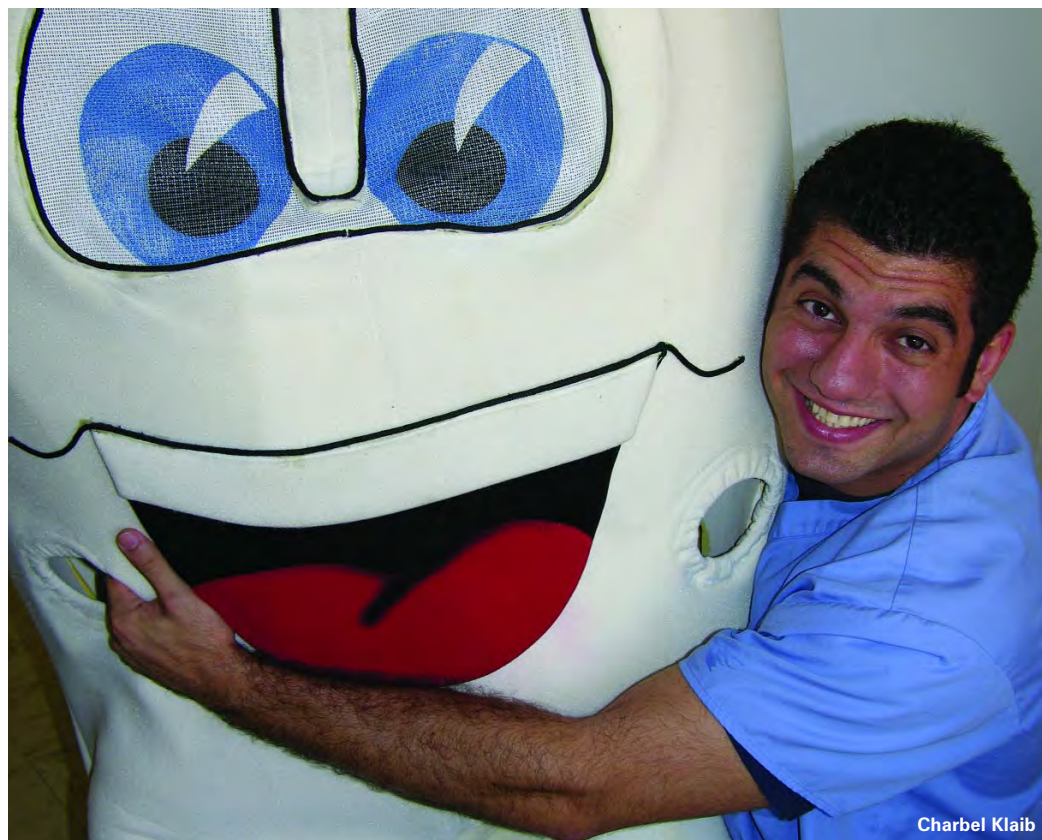
This committee invests a tremendous amount of time, effort and passion into selecting students for admission into the college's D.M.D. program. If you look at the college's outcome measures, in terms of national board scores, state board exam pass rates, the drop out rate and repeat rate, and acceptance rates to advanced and graduate programs after dental school, students in the college's D.M.D. program are excelling.

Those successful outcome measures are a strong indication that the Committee on Student Admissions and Recruitment's process of careful, holistic evaluation of people as students, as members of their community and as future dentists is also excelling. ♦

When man and suit combine, it's ...

Molar Man Time

BY ADRIANNA RODRIGUEZ



It's a big tooth suit! Although more commonly known as the College of Dentistry's "molar mascot," to Charbel Klaib, 25, the third-year dental student usually inside the cavity-free tooth, when man and suit combine, it's Molar Man time.

"It's kind of like Power Rangers but not nearly as cool," Klaib said.

For more than two years, when Molar Man is needed, Klaib has left his scrubs behind to don the costume's Lycra undergarment he calls a "ballerina outfit" and the molar body.

Sometimes mistaken for a girl but never for an incisor, Molar Man can be trusted to make appearances at most dentistry events. It's impossible to see who's inside the costume, but everyone knows that Klaib and his Molar Man alter-ego are one and the same. Mainly because he and the mascot are never seen together, said Klaib.

"You never see Superman and Clark Kent in the same room," he laughed.

Yes, but can Molar Man change in a phone booth?

Klaib doesn't mind people knowing his true identity; at the same time, though he doesn't correct rumors of others being the true Molar Man.

"As long as there's a little doubt," Klaib said.

Like Her Majesty's Secret Agent 007, Klaib was tapped to join the college's mascotting service after the dental senior who previously wore the costume graduated.

He jokes that he was chosen because he doesn't mind getting sweaty in the hot suit and walking around showing his boxers through the Lycra undergarment.

"I've been told I have quite the matching personality for it," Klaib said.

Once inside the costume, Klaib took mascotting to a higher level. He created the Molar Man persona and his signature trademark greeting of a handshake, high-five and mini-jump. When in the suit the tall Klaib can only stick out his arms to his elbows and see straight ahead. The molar might be a little too big and the Lycra a bit too small, but the shoes, Klaib said, are just right.

"Dr. Scholl's has nothing on these shoes," Klaib said about the molar's big, blue, clown shoes. "They're not the best for football though."

Although not the next hall-of-famer, that doesn't stop Molar Man from playing a little football at dental student gatherings. Molar Man can pass sideways and skip "at a faster pace" when running the ball.

Because of the molar's limited mobility and visibility, Molar Man only makes appearances with a handler close by to make sure he doesn't get lost or cornered—and to block tackles.

Of all the dentistry events in which he's performed, the college's annual "Give Kids a Smile" is Klaib's favorite mascotting adventure.

"That was a lot of fun for me because it was all kids and you're at their level," Klaib said.

According to Klaib, children have one of three reactions to Molar Man. The kids either love him from the start, fear and then come to love him, or just flat out cry in terror. They also either hug,

dance with his cuspid and roots or beat Molar Man up. That's where it gets tricky, as Klaib said he has to be careful not to get punched in his "furtation," or the area between the roots of the tooth. Ouch, talk about tooth sensitivity.

Despite the challenges and dangers of wearing the college's mascot, Klaib enjoys

being Molar Man. Klaib said performing as Molar Man has been one of his most memorable dental school experiences. He considers his stint as Molar Man to be a unique way to participate in college activities, and he plans to continue cultivating his Molar Man alter-ego... At least until graduation.

After that, another brave agent will assume the Molar Man identity, and the legend in big blue clown shoes will carry on. ♦

**Molar Man...
Sometimes
mistaken for a
girl, but never
an incisor.**

Dentistry's Acid Etch talent show is a hit!

Dental freshman **Danny Bass** put his exuberant and creative percussive talent in action to win \$100 and first place on May 4 in the first-ever College of Dentistry Acid Etch Talent and Comedy Sketch. Organized by the UFCD Dental Ambassadors, Acid Etch featured 16 student and faculty performances — including a crowd-wowing baton-twirling act by Dean **Teresa A. Dolan** — and video skits produced by each class in the D.M.D. program.

Attended by more than 200 dentistry faculty, staff and students, Acid Etch was modeled on TV's American Idol, complete with a judging trio of fave faculty members **Buddy Clark**, D.M.D.,



■ Florida Dental Foundation Awards

David Mansour (right), **Andrew Dietrich** and **Maggie Novy** (standing with Associate Dean for Admissions and Financial Aid Venita Sposetti and Dean Teresa A. Dolan) were awarded Florida Dental Health Foundation dental education scholarship awards. The Florida Dental Health Foundation is a charitable organization established by the Florida Dental Association in 1980 with the goal of supporting dental and allied profession education in the state of Florida.

■ UF Dental students win Hinman Scholarships

UF dental students **Manav Malik** and **Maggie M. Novy** have been awarded scholarships from the Thomas P. Hinman Dental Society. The awards were presented at a special luncheon held recently during the 94th Hinman Dental Meeting in Atlanta.

Student recipients of the scholarships are known as "Hinman Scholars." Malik and Novy are members of the American Dental Association and rank among the top 10 percent of junior dental students from 37 Southeastern colleges and universities.



Novy



Malik

■ Other Scholarships/Awards

- The Southern Association of Orthodontists awarded eight orthodontic residents research grants totaling \$3,970. The resident awardees include **Aaron Carroll**, **David Chen**, **Daniel Jones**, **Eric Park**, **Shreena Patel**, **Michael Sutton**, **Melanie Wexel**, and **Noelle Williams**.
- Dental sophomore **Robert Weaver** was awarded second place in the 2006 AADR Caulk/Dentsply competition in Orlando, Fla. The award was particularly noteworthy because the competitors represented many of the leading dental research institutions in the United States.
- Three UF dental students received 2005-2006 academic scholarships from the ADA Foundation. **Jose Sarasola** received the Minority Dental Student Scholarship in the amount of \$2,500, and **Kirk James Snyder** and **David Michael Yates** both received Dental Student Scholarship awards in the amount of \$2,500.
- Dental Senior **Irma Iskandar** was awarded the American Association of Women Dentists/University of Florida Chapter Colgate Research Scholarship Award in the amount of \$500. Iskandar was selected to receive the award based on her academic achievement and demonstrated excellence in research.
- **Shawn Douglas**, D.D.S., who just completed a residency in advanced education in general dentistry, is the recipient of the prestigious J. Frank Collins Award. Established in 2000 and named in honor of UF dentistry Professor J. Frank Collins, the annual award is presented to the College of Dentistry Jacksonville general dentistry resident who best exhibits the qualities of dedication, cooperation, service efficiency and excellence while providing patients with comprehensive dental care.



Danny Bass

Ph.D., (as Randy), **Venita Sposetti**, D.M.D., (as Paula Abdul) and **Marc Gale**, D.M.D., M.Ed., (as the irascible Simon). The judges critiqued performers in good spirit and with enormous humor. After Bass' winning drum/stomp/drink-blending performance, which garnered a standing ovation from the audience, Gale quipped, "I would like to know why you got to wear earplugs and we didn't!"

Gator Bytes



In 1980, **M. Franklin Dolwick, D.M.D., Ph.D.**, professor of oral and maxillofacial surgery and director of hospital dentistry for Shands, submitted an article with four collaborators to the American Journal of Roentgenology. The article, entitled “Arthrotomography of the Temporomandibular Joint,” has since become one of the top 100 articles cited over the journal’s 100-year history of scientific reporting on medical imaging—swinging in at number 78 with a total of 178 citations. The achievement was celebrated last January in the Centennial issue of AJR, the journal of the American Roentgen Ray Society.

Roger B. Fillingim, Ph.D., professor of community dentistry and behavioral science, has been awarded a UF Research Foundation Professorship Award. The three-year professorship recognizes Fillingim for his distinguished record of research and scholarship, which is expected to lead to continued distinction in the field of pain research. The professorship term is 2006 through 2008, and includes a \$5,000 salary supplement for each of those years as well as a \$3,000 one-time allocation in support of his research program.



Henry A. Gremillion, D.D.S., professor of orthodontics and director of the Parker E. Mahan Facial Pain Center, received the Florida Dental Association’s Annual Dental Educator Award.

Gremillion was presented with the award during the association’s Florida National Dental Congress held in June in Orlando. Gremillion

was nominated for the award by dental students in recognition of the excellence of his academic contributions, and his support of and commitment to his students.



Barbara Hastie, Ph.D., a research assistant professor of community dentistry and behavioral science, received a five-year, \$805,194 National Institutes of Health grant to study ethnic differences and genetic factors in acute

postoperative pain and analgesic response. In addition, Hastie is the recipient of the 2006 “Future Leaders in Pain Management” small grant award from the American Pain Society. This award is given to three researchers from around the country and is aimed to advance pain research. Hastie will investigate ethnic differences in pain and side effects using the Third Molar model.

Richard J. Lamont, Ph.D., professor of oral biology, has been appointed director of translational research and career development. The position is newly instituted to facilitate research infrastructure



award goals of fostering the career development of junior and transitioning faculty, and in providing clinical faculty and residents with greater access to the basic science research programs in the college. Lamont’s leadership in developing the careers of dental faculty is considered critical to the successful development of a translational research program within the college that bridges basic science research and clinical practice, and will ultimately lead to improved patient care.

Richard Lamont, Ph.D., and **Ann Progulske-Fox, Ph.D.**, both professors of oral biology, were honored with Distinguished Scientist awards by the International Association for Dental Research

during the association’s 84th General Session & Exhibition, held in July in Brisbane, Australia. The prestigious awards are bestowed on internationally renowned basic science researchers for their significant contributions to specific IADR research areas. Lamont received the Distinguished Scientist for Basic Research in Oral Biology Award, and Progulske-Fox was honored with the Distinguished Scientist for Basic Research in Periodontal Disease Award.



Ivar A. Mjör, B.D.S., M.D.S., Dr. Odont., professor of operative dentistry and Academy 100 eminent scholar, received the European Federation of Conservative Dentistry’s prestigious Award of Excellence during the

federation’s February meeting in Rome, Italy. Mjör, an internationally respected dental educator and researcher, was tapped to receive the award in recognition of his outstanding contributions to restorative dentistry in Europe. He also presented on practice-based dental research during the meeting. The European Federation of Conservative Dentistry is made up of national dental organizations from the countries of France, Germany, Great Britain, Holland, Italy, Spain, Sweden, Switzerland, and Turkey.

Franci Stavropoulos, D.D.S., an associate professor of oral and maxillofacial surgery and a diplomate of the American Board of Oral and Maxillofacial Surgery, will serve as an examiner on the group’s Examination Committee, the certifying board for oral and maxillofacial surgeons recognized by the accrediting Council on Dental Education of the American Dental Association.



This achievement follows her appointment as site visitor for the ADA’s Accreditation of Oral and Maxillofacial Surgery Residency Programs in 2005.

■ New Faculty

Lorena Baccaglini, D.D.S., Ph.D., is appointed assistant professor of epidemiology in the department of community dentistry and behavioral sciences. Baccaglini comes to UF from the University of Texas Health Science Center at San Antonio. Baccaglini earned her dental surgery degree, magna cum laude, from the Medical College of Virginia, and her doctoral degree in epidemiology from the University of North Carolina at Chapel Hill.

David J. Culp, Ph.D., is appointed professor of oral biology. Culp comes to UF from the University of Rochester with an NIH-funded research portfolio of projects studying the biology of salivary glands and the synthesis, secretion and function of mucins, which play a significant role in the body's mucosal defense against invading microorganisms. He earned his doctoral degree from the University of California, Berkeley, and is a member of the editorial board of the Journal of Dental Research and the NIH Oral, Dental and Craniofacial Sciences Study Section.

Biswap Das, Ph.D., is appointed research assistant professor of oral biology. Das comes to UF from the University of Rochester. He earned his doctoral degree in biophysics, molecular biology and genetics from the University of Calcutta, India, where he was named the India National Science Academy "Young Scientist" of the year in 1997.

Leandra Moore Serrao Dopazo, D.D.S., is appointed clinical assistant professor of orthodontics. She comes to UF after three years in private practice. Dopazo has also served as a clinical professor at the undergraduate clinic of the Universidade Federal do Para, Brazil. She earned her dental degree from the Universidade Federal do Para, Brazil and completed a fellowship at UF in orthodontics for the general practitioner. She also holds a certificate in orthodontics from UF.

Máire E. Doyle, Ph.D., has been appointed research assistant professor of oral biology. She previously worked at Ixion Biotechnology in Alachua, Fla. Doyle, who attended Trinity College in Dublin, Ireland, enjoys interacting with scientists from multiple disciplines who work to apply science for the good of patients.

Josephine F. Esquivel-Upshaw, D.M.D., is appointed associate professor of prosthodontics. Esquivel-Upshaw comes to UF from the University of Texas Health Science Center at San Antonio, but previously served on the UF prosthodontics faculty for six years before leaving for San Antonio in 2001.

Scott S. Grieshaber, Ph.D., is appointed assistant professor of oral biology. Grieshaber comes to UF from the National Institutes of Health Host-Parasite Interactions Section. He earned his doctoral degree in microbiology from the University of Wyoming, and his research interests are the unique interactions of intracellular parasites with host cells.

Uma Nair, B.D.S., M.D.S., D.M.D., has joined the endodontics department as a visiting clinical assistant professor. Nair was previously at the University of Pittsburgh School of Dental Medicine where she earned her Doctor of Dental Medicine degree and completed a residency in endodontics. Her research

interests include tissue engineering, endodontic materials and healing of periapical lesions. Nair, who graduated from the Medical College in Trivandrum, India, enjoys interacting with students and residents and translational research projects.

Roberta Pileggi, D.D.S., M.S., is appointed assistant professor of endodontics. She comes to UF from the University of Texas Houston Dental Branch where she served as director of undergraduate endodontics. Pileggi received her dental degree in 1990 from the Universidade Paulista, Sao Paulo, Brazil. She received a Master of Science in oral biology and a certificate in endodontics from the University of Maryland in 1994. In 2005, she completed a fellowship of master's in education from the Baylor College of Medicine and University of Texas.

Kristofer Kyle Rau, Ph.D., is appointed research assistant professor of neuroscience. Rau earned his doctoral degree in neuroscience from the University of Florida's Interdisciplinary Program in Biomedical Science, department of neuroscience, College of Medicine.

Claudio Varella, D.D.S., M.S., has joined the endodontics department. He was previously an adjunct professor of endodontics at UNIGRANRIO, Rio de Janeiro, Brazil, where he also received his Doctor of Dental Science degree. Varella also earned a Master's of Science from the University of Michigan in Ann Arbor. His main research interest is in the pulpal response to injury.

Geraldine M. Weinstein, D.D.S., is appointed clinical assistant professor of operative dentistry. She comes to UF from private practice in Waltham, Mass. She received her dental degree in 1994 from the University of Maryland and, in 1996, completed a fellowship in general dentistry at Brigham and Women's Hospital. Her research interests are in clinical dentistry.

Özlem Yilmaz, D.D.S., Ph.D., is appointed assistant professor of periodontology with a joint appointment within the department of oral biology. Yilmaz earned her doctoral degree in oral biology from the University of Washington and her dental surgery degree from Istanbul University. Among her research foci are the mechanisms Porphyromonas gingivalis uses to attach to host epithelial cells, modulation mechanisms of gingival epithelial cell survival responses mediated by P. gingivalis, and modulation of actin cytoskeleton and associated cell structural-signaling molecules during the inter-cellular spreading of P. gingivalis in gingival epithelium.

■ Faculty Promotions & Tenure

Enrique Bimstein, tenure; **Paul K. Blaser** to the rank of clinical professor; **Matthew J. Dennis**, to the rank of clinical associate professor; **Roger B. Fillingim** to the rank of professor; **Martin Handfield** to the rank of associate professor with tenure; **L. Shannon Holiday** to the rank of associate professor with tenure; **Gail Schneider-Mitchell** to the rank of associate in dentistry; and **Scott Tomar** to the rank of professor.



Baccaglini



Culp



Das



Dopazo



Doyle



Grieshaber



Nair



Pileggi



Rau



Varella



Weinstein



Yilmaz



ESPRIT DE CORPS

Michael D. Louria, D.M.D.

Class of 1997

Age: 36.

Family: Married to Dinorah Louria, with two daughters, Ella (4) and Jillian (2)

Practice: Endodontics, Winter Springs, Fla.

Michael Louria bleeds Orange & Blue. A UF Gator adorns the breast of his scrubs, he's an avid Gator Football Fan, and, when it comes to supporting the UF College of Dentistry, he puts his money.... Uhm, make that "coin".... where his mouth is.

Louria financed the design and production of a University of Florida College of Dentistry commemorative coin based on the Air Force tradition of challenge, or commander, coins. Now he's selling them with all proceeds benefiting the college's student activities budget.

"My thought was that this coin would be a unique symbol representing the school. In addition to its symbolism, I would be able to give something back to the College of Dentistry," said Louria. "Basically, it's a camaraderie thing to show who you are and your pride in where you come from... But, who knows, maybe it will become its own tradition at UF."

Louria's Air Force commission ended in 2005 when he separated at the rank of major, but his continued pride in his military service is clear — the patches, medals, ribbons and coins he earned during his Air Force career are prominently displayed in his practice above Old Glory in an elegant, glass case. He takes obvious pleasure in recounting the meaning behind items in the case, reliving his military assignments with each one.

"The case is in chronological order, from top to bottom. The patches on the left represent the com-

mands: Air Combat Command, United States Armed Forces in Europe, Air Education and Training, and The Chief's Own in Washington, D.C.," Louria explained.

"The right side presents the dental squadron patches, and in the middle are the corresponding coins for the bases."

Given as awards from base or dental commanders for meritorious service, military challenge coins have a long and colorful history. No one knows exactly how the military coin tradition began, but legend holds its origins to be in WWI, when wealthy, young university students enlisted in the military's first flying squadrons.

One such well-heeled lieutenant consigned to have solid bronze medallions embossed with the squadron emblem and distributed to every man in his unit. According to the story, the lieutenant was captured and stripped of personal identification after his aircraft was shot down by German enemy fire.

The squadron medallion, still safely held in a leather pouch about his neck, helped prove his identity after the young pilot escaped his

captors during an aerial raid, donned civilian clothing and navigated the deadly no-man's land into French territory. He fell-in with French troops who nearly executed him as a spy. Fortunately, recognition of his squadron emblem on the medallion saved his life, leading to the command coin motto, "Don't get caught without it!"

The motto remains significant for young officers.

"When you go to the officer's club, if you don't have your coin on you, you're gonna be buying drinks for somebody, so you always keep a coin on you," Louria said with a laugh.

Sales of the UFCD commemorative coin have been good; and although the UFCD coin is a high-quality product, beautifully embossed in heavy, pewter-like metal and lasting enamel colors, Louria has insisted on keeping the price student-friendly at \$10 plus \$2.50 S&H. Each coin is individually numbered, and all profits from the sale of the coin benefit student organizations, educational trips and special events.

"This coin was something I just wanted to make for myself and the school, but it had to be affordable for students," Louria said. "When I went to UF, I bought tons of great T-shirts.

Eventually, you're going to outgrow T-shirts, but you're never going to outgrow a coin."

To purchase a UFCD commemorative coin that will last a lifetime, contact Dr. Michael Louria directly at 5738 Canton Cove, Suite 100, Winter Springs, Fla. 32708, or via email at mlouria@yahoo.com. ♦



Class Notes

CLASS OF 1976

Charles L. Ford III, who practices general dentistry in Saint Petersburg, Fla., has been elected to the American College of Dentists.

CLASS OF 1977

Gary Snyder practices in Fort Myers, Fla. but recently traveled to England and Alaska. Gary enjoys spending time with his grandchildren and recently bought a 10-year-old farmhouse in Virginia.

CLASS OF 1978

Carl E. Juliao has been working as a substitute dentist for a friend in need two or three times a year since he sold his practice in December of 2003. Carl lives in a remote beach town in Panama called Rio Hato, and he enjoys traveling, fishing and spending time with his five grandchildren.

CLASS OF 1979

Gary D. Kitzis' practice in Woodbury, New York is limited to periodontics and prosthodontics, and his special interests have continued to be occlusal therapy and implantology. Gary is in the office four days a week and teaches once a week at Stony Brook University. He was recently promoted to clinical professor in the department of post-graduate periodontics at Stony Brook and received the American Academy of Periodontology Outstanding Educator Award.

Jorge Coro practices orthodontics in Coral Gables, Fla. and is currently serving as president of the Florida Association of Orthodontists. His oldest daughter, Ivette, is entering UFCD this fall with the Class of 2010.

CLASS OF 1980

Gregory Reddish practices general dentistry in Orlando, Fla. His oldest son, Jonathan, is now a senior business major at the University of Central Florida. Greg has taken trips to the south of France, Paris and Tuscany. He enjoys snow skiing and collecting rare/exotic fruit trees. Greg is currently the president of the UFCD Academy of Alumni & Friends.

Alan Fetner and Mary Hartigan ('82) specialize in periodontics and implants and practice together in Jacksonville, Fla. They are proud to report their oldest son, Michael, enters dental school at UF with the Class of 2010. The Fetners took a trip to China and Europe, where their sons worked in a German dental lab near Frankfurt for three months, enjoyed the Olympics in Turino, Italy and taught English in China for seven weeks. Alan is past-president of the Florida Association of Periodontics.

CLASS OF 1981

Jimmy Glenos practices orthodontics in St. Augustine, Fla. He and wife Karen have two children, James and Brittany. James is an undergraduate student at UF, and Brittany will attend Rollins College in Winter Park, Fla. this fall. Jimmy is planning a return trip to Greece this summer to visit Andres Island. He routinely fishes for marlin out of St. Augustine and the Bahamas, and is the director of the Florida Association of Orthodontics.

Jess Yates' son, David, is a second-year dental student at UF. Jess enjoys diving and completed her first 90-foot cave dive in Cozumel, Mexico this year.



Uganda, Africa — I traveled with other members of my church and a dentist from Ohio to Uganda, Africa for a 9-day dental mission trip May 25th through June 4th. We visited three different villages during six days in the field, extracting teeth and providing dental care to more than 1,000 people. Thanks to the education I received at UFCD, I was able to share my skills across the world. What a rewarding experience!

Thanks UFCD!
John Raulerson, Class of 2004

ALUMNI

TAKE THE SURVEY

The college's Office of Education will soon be surveying alumni from the classes of 2001 through 2004 to learn your opinion of the quality of education you received at the University of Florida College of Dentistry.

Your perspective on the education you received here at the College of Dentistry is vitally important to the outcomes assessment of our educational program. Soon, you will receive a post card in the mail asking you to participate in a 58-question opinion survey. Please complete and return the self-addressed and stamped card letting us know how you would like to receive the survey, which can be delivered by mail or telephone – your choice. The survey will be conducted on behalf of the college by the Florida Survey Research Center at the University of Florida.

Your participation is vital to the college's self-assessment process, and I appreciate your support in this endeavor.

Teresa A. Dolan
Professor and Dean

EVENTS CALENDAR

October 27, 2006

Pedagator Alumni & Friends
Hilton University of Florida, 8:00am-5:00pm
Continuing Education Business Meeting Luncheon

November 10-11, 2006

Dental Fall Weekend 2006
Hilton University of Florida
November 10: CE, Reception, and Reunions:
Class of 1976, 1981, 1986, 1991, 1996, 2001
November 11: Business Meetings College
Tours, BBQ, FL/SC Football (limited tickets
available with CE registration)

December 2006, TBA

Society of Senior Faculty Luncheon
Hilton University of Florida

June 14 -16, 2007

FNDC
Gaylord Palms Resort and Convention Center
November 16 – 17, 2007
Dental Fall Weekend 2007
Hilton University of Florida

For more information, contact Sue Guido at 352-273-5781, or email aguido@dental.ufl.edu, or visit www.dental.ufl.edu/alumni.



Tuba City, AZ — I just wanted to say hello and update you on my life since graduation in 2005. Last June I took a position with Indian Health Service in a dental clinic located on the Western Navajo Reservation in Tuba City, Az. My job title is “dental officer,” and I am also a commissioned officer in the U.S. Public Health Service.

Our clinic is one of several outpatient clinics at tribal-owned hospital, Tuba City Regional Healthcare Corporation. The dental clinic has been recently remodeled and has 20 chairs, and staff includes our dental director, six general den-

tists, a contract prosthodontist, an endodontist, an oral surgeon, a pediatric dentists, two hygienists and about 20 Navajo and Hopi dental assistants (also called dental therapists and expanded function assistants).

Needless to say, the clinic has been a great learning environment thus far and I feel it is almost like a residency. Typically, we see a lot of emergency patients, so I’ve become really proficient at extractions (even impacted 3rds), endo accesses, and doing REALLY BIG restorations.

We also see a lot of pediatric patients at the clinic. The caries rate, especially in children, is so high that much of our time is spent with basic disease control. We are active in our community outreach, and we visit schools, set up mobile units, and examine and place sealants on the students.

The children on the reservation have the highest caries rate in the nation, and our clinic is one of several on the reservation participating in a study aimed at determining whether the transmission of oral bacteria from mother/caregiver to child can be prevented via the application of a chlorhexidine varnish on the mother’s dentition. We are hoping the results of the study will push the varnish along to get FDA approval.

I just wanted to say hello and update you all on how things are going out here. I hope all is well in Gainesville!

Best,
Jeffrey Shirah, Class of 2005

Bruce Manne practices endodontics in Ormond Beach, Fla. and is pleased to report **Robert Borer** ('01) has joined his practice.

Phyllis Filker is married and has two children, Erin, 20, and David, 16. She is a full-time faculty member at Nova Southeastern University in the department of cariology and restorative dentistry, and she serves as the director of operative dentistry and the director of quality assurance.

CLASS OF 1983

Heberto M. Salgueiro practices endodontology and makes his home in Miami with his wife, Rita, and their three daughters. This summer he received the Honorary Member Award from the Latin American Dental Study Club-Hermandad Estadounidense Latino Odontologica Dental Association (CEOLA-HELO).

CLASS OF 1985

Mary Hencinski practices general dentistry in Freeport, Fla. She moved into a new office in June and traveled to Poland in July.

CLASS OF 1986

Craig Malin is an endodontist and lives and works in Carlsbad, Cal. with his wife and family. His daughter, Kelli, graduated high school this year and will cheer for the University of Arizona in the fall. This summer, the Malins plan a cruise to Italy, Greece and France.

Steven R. Bateh practices general dentistry in Jacksonville, Fla. where he makes his home and enjoys spending time with his family and doing church volunteer work. His daughter, Brittany, begins her freshman year at UF this summer.

CLASS OF 1989

Pam Spigarelli Johansen (D.M.D. '89/ AEGD '90) sold her Clearwater, Fla. practice in January to **Vincent Veronick** ('01) after nearly 16 years of solo dentistry. She plans to dedicate her time to her family, and volunteers at a Clearwater dental clinic for the homeless.

CLASS OF 1990

Peggy Walsh Johnston practices general dentistry in Palm Coast, Fla. with Greg Johnston, Travis Ray, and **Jessie Bech** ('01). Peggy and her family enjoy cruising and their last trip was to the Panama Canal in April. She loves golfing and plays often.

Jeffrey Krichmar practices general dentistry in Coral Springs, Fla. Jeffrey loves taking long-distance motorcycle trips, and enjoyed ski trips this year to Lake Tahoe and Park City, Utah.

Michael L. Danze practices general dentistry in Mathews, N.C. He took trips to Europe in summer 2004, Lake Tahoe and San Francisco in Spring 2005 and Colorado Springs in 2006. Michael also enjoys playing tennis and golf.

CLASS OF 1992

Craig Oldham practices general dentistry in Brandon, Fla. Craig and his family take interesting trips every year to places such as Russia, China and Italy. Craig enjoys woodwork, spending time with his children, and participating in Rotary Club.

CLASS OF 1993

Daniel Savett is in the military, stationed at Ramstein Air Base in Germany, and was promoted to lieutenant

colonel in June. His daughter, Hannah, turned five-years-old in July, and a new baby is on the way. Daniel and his family have traveled throughout Europe during their stay in Germany, and Daniel enjoys amateur radio and upgraded his German radio license.

David J. Ferlita and wife, Christine, have three children; daughters Taylor, 6, and Baily, 5 and son, Dawson, 2. David is president of Project Dentist Care, an access-to-care umbrella network of the Florida Dental Association, which organizes “Give Kids a Smile” and other access programs for children and adults throughout Florida.

CLASS OF 1994

Ray Della Porta practices general, cosmetic and implant dentistry in Vero Beach, Fla. He enjoys fishing and family time with his wife and two sons, Trace 6 and Grayson, 3. The Della Porta family recently visited Uruguay, and Ray also is a clinical instructor, aesthetic advantage continuum.

CLASS OF 1995

Lynne Almerico Byers practices general dentistry in Massachusetts part-time with her husband and is an associate professor at Bristol Community College. She has a 7-year-old daughter named Carley. One of Lynne’s accomplishments was building her dream home on the Assonet River in Massachusetts. She is also a New England lecturer to dentists and dental hygienists on topics such as diabetes, periodontal disease, dental radiology and local anesthesia.

Rick Parent reports he travels to Seattle several times annually to attend the Kois Center for Continuing Education. Rick says he still tries to play golf and is enjoying dentistry 11 years out of school.

Bobby M. Collins is an associate professor in oral and maxillofacial pathology at the University of Pittsburgh School of Dental Medicine. He obtained a Master of Science in clinical medical education from UPMC in 2004, and was selected as “Grand Marshal” at the University of Pittsburgh School of Medicine graduation for the class of 2006.

CLASS OF 1996

Tom Galinis and **Shannon Plymale Galinis** ('97) have three children: Zachary, 5, Jeremy, 4, and Kaleigh, 3.

CLASS OF 1997

Jennifer Brown-Jackson is married to Scott Jackson. They had their second daughter, Savannah Reece Jackson, on July 10, 2005. They also have a 3.5-year-old daughter named Madison. Jennifer recently celebrated her sixth year in private practice in Chiefland, Fla.

Vivian Quesada-Fox practices general dentistry in Saint Petersburg, Fla. She and her husband of 9 years, John, have three daughters, Lauren, 7, Samantha, 4, and Olivia, 6-months-old. They enjoy trips to Disney World and are going on an RV-ing trip to the Keys this summer.

Vishtasb Broumand practices oral and maxillofacial surgery and head and neck tumor and reconstructive surgery. He recently left his position as assistant professor of oral and maxillofacial surgery at the University of Miami to enter private practice in Daytona Beach, Fla. He also recently spent two weeks in the Middle East, particularly in Iran, operating on earthquake victims. He recently published a landmark article on bisphosphonates and

osteonecrosis of the jaws upon completion of his fellowship in head and neck tumor and reconstructive surgery. Vishtasb enjoys driving exotic sports cars and learning to play golf.

John M. Hood (AGED '97) makes his home in Havelock, N.C. and is an activated Navy reservist.

CLASS OF 1998

W. Scott Waener married Mary Louise Katherine Kusckenbrink on March 18, 2006. In May 2005, Scott took a surfing trip to Tahiti and surfed the world-famous wave "Teahupoo."

David Petrilli is in a general dentistry partnership (Caldwell, Bills & Petrilli) in Charlotte, N.C. He was married in July 2004 and had his first child, Grant Thomas Petrilli, on July 14, 2005. David reports he traveled to New York City and saw his beloved Yankees play in the Bronx.

Charles DeWild has two children: Ethan, 3, and Audrey, 2. He is finishing his oral surgery training and has taken a job in Orlando, Fla.

CLASS OF 1999

James E. Ozer practices general dentistry in Lake Placid, Fla. He and his family recently traveled to Japan for a three-week visit with family, stationed there for their work. In his free time, James enjoys flying.

Mark Goodnight practices orthodontics in Tampa, Fla. He has a new baby girl named Bailey and purchased a second practice in south Tampa in August 2005.

CLASS OF 2000

Robyn Lesser Melamud practices pediatric dentistry and opened her own practice in Tampa, Fla. She has a one-year-old daughter named Sasha Maya.

CLASS OF 2001

Duane Keuning practices general dentistry and formed a partnership when he purchased a practice in June 2005 in Juno Beach, Fla.

Daniel Lauer and his wife have a baby girl, Jordie Farah Lauer, who will be two years old in September. Daniel was recently board certified in periodontics by the American Academy of Periodontics.

Alfredo D. Martin practices general dentistry in a new start-up practice in Cooper City, Fla. He and his wife have a 3-year-old daughter and are expecting a boy in November.

William Pantazes (AEGD '01) practices general dentistry in Largo, Fla. and received his Master of Science in craniofacial pain from Tufts University.

CLASS OF 2002

Timothy D. Stewart practices general dentistry in Richmond, Va. He joined as an associate when he graduated and is now a partner. Timothy and his wife have two daughters: Anne Hadley, 3, and Emily, 1.5. He serves as the treasurer of the Trinity Episcopal School Alumni Board.

CLASS OF 2003

Shelly Donegan McAvoy is a captain on military active duty stationed in Hanau, Germany, following a 1-year AGD at Ft. Meade, Md. Shelly moved to Germany for a 3-year tour that ends in November 2007. She is the proud mother of a baby girl named Madison, born in June. She has taken many exciting trips to Rome, Barcelona, Paris, London, Amsterdam, Mallorca, Athens, Austria, Prague, Venice and all over Germany. Shelly plans to return to Florida after her tour ends to open a practice in the Sarasota/Lakewood Ranch area.

Anissa Ahmadi (D.M.D. '03/ Pedro '05) is an associate in a pediatric dentistry clinic in Fort Myers, Fla. Her daughter, Yasmeen Mujtaba, was born April 22, 2005, and son, Yusef Mujtaba was born May 7, 2006.

CLASS OF 2004

Stephen Strout purchased a practice in St. Augustine, Fla. in February. Last summer he traveled to Italy and France and to Tahiti last Christmas.

CLASS OF 2005

Leslie Oakes is currently serving in the U.S. Army and practicing dentistry at Ft. Carson, Col. She will move to Mannheim, Germany in September after completing a 12-month AEGD program. Summer plans include a mission-trip to the Honduras.

UFCD grads earn Outstanding Young Alum Awards

Stephanie Reeder, Class of 2003, and Michael Louria, Class of 1997, were honored with the university's Outstanding Young Alum awards during the Alumni Association's Spring Weekend festivities in April. Reeder and Louria were presented Outstanding Young Alumni plaques by UF President and No. 1 Dentist Bernie Machen during a special breakfast held at Emerson Alumni Hall.

Reeder and Louria were selected by Dean Teresa A. Dolan to be honored as outstanding young alumni for their distinguished service to their communities and the college.

Reeder graduated from the college with her dental degree in 2003 and is currently a resident in oral and maxillofacial surgery with career plans in dental education with an ongoing interest in medical/dental missions and international health. Reeder has shared her academic expertise as a guest lecturer, adjunct instructor and teaching assistant. She is the founder of the UFCD Dental Ambassadors, a student program established to foster student/alumni interaction and develop a student mentor program.

Louria, a member of the college's Class of 1997, went on to earn a certificate in endodontics while serving in the United States Air Force. He is currently in private practice in Winter Springs, Fla., where he serves as an active member of numerous professional organizations and participates in table clinics and professional presentations. Of his many achievements, Louria is especially proud of the beautiful UFCD commemorative coin that he designed to give students, alumni, faculty and staff a symbol of their school spirit and ongoing commitment to excellence in dental education.



Reeder



Louria

Development and Alumni Affairs Program Assistant

Please welcome Rebecca Graves as the college's new development and alumni affairs program assistant. Rebecca, who joined the college April 10, comes to dentistry from the College of Design Construction and Planning Dean's Office.

Rebecca graduated from the University of South Florida with degrees in special education and elementary education and taught in middle and high school for 17 years. She and her husband have two grown daughters and one very handsome grandson.

After her family, Rebecca's most favorite things are going to Disney and Gator sports. She looks forward to sharing the excitement that surrounds the University of Florida with all of the friends and supporters of the College of Dentistry.

Go Gators!



Graves



Team Caliente — Captain Stanley Asensio, Shawn Swingle and Ricardo Asensio — display their winning, record-breaking 54.97 pound King Fish caught off John's Pass, Fla.

The fishing is HOT, HOT, HOT!

Stanley Asensio ('88) practices general dentistry, sedation dentistry and orthodontics in Orlando, Fla. Stanley and his wife have a new addition to the family, a baby boy named Stanley Henry. Stanley recently completed his ACLS Advanced Cardiac Life Support license and sedation fellowship, and is eligible and currently working on his board certification for sedation, forensics and the American Academy of Orthodontics. Stanley enjoys fishing and has a professional fishing team named "Caliente" that has been competing throughout the state of Florida and breaking and establishing new records on the Southern King Fish Association circuit. They have appeared on the cover of two fishing magazines and many other fishing publications and media.



2006 DENTAL FALL

Schedule of Events

Friday, November 10th

Registration & Continental Breakfast

7:00 a.m. - 7:30 a.m.

UF Hilton Hotel, Pre-function area

Exhibit Tables & Continuous Break

7:30 a.m. - 3:00 p.m.

UF Hilton Hotel, Pre-function

AA&F Annual Business Meeting and Awards Presentation

7:30 a.m. - 8:30 a.m.

UF Hilton Hotel, Century A

CE Presentation

8:30 a.m. - 12:00 p.m.,

1:00 p.m. - 3:30 p.m.

UF Hilton Hotel, Century A

CE Lunch

12:00 p.m. - 1:00 p.m.

UF Hilton Hotel, Albert's Restaurant

Dean's College Update BOD & DAC

3:45 p.m. - 4:30 p.m.

UF Hilton Hotel, Century A

GDT Focus Group

4:30p.m. - 5:30p.m.

UF Hilton Hotel, Two Bits Lounge

Academy of Alumni & Friends Reception

5:30 p.m. - 7:30 p.m.

UF Hilton Hotel, Pre-function Area

Reunion Dinners

7:30 p.m. - 10:00 p.m.

UF Hilton Hotel, Century A

Saturday, November 11th*

BOD Meeting

8:30 a.m. - 10:00 a.m.

UF Hilton Hotel, Hawthorne

DAC Meeting

10:00 a.m. - 12:00 p.m.

UF Hilton Hotel, Azalea

College Tours - Dental Ambassadors

12:00 p.m. - 2:00 p.m.

UFCD Lobby

Senior Recognition & Family BBQ

2:00 p.m. - 4:00 p.m.

UFCD West Entrance

Shands Bus to Stadium

4:00 p.m. - 5:00 p.m.

UFCD West Entrance

FL Gators vs. SC Gamecocks

Time: TBA

The Swamp

** Saturday schedule subject to change due to kick-off time.*

ACADEMY of ALUMNI
and FRIENDS
UFCD

Host Hotel

1714 SW 34th Street
Gainesville, FL 32607
Tel: (352) 371-3600



*University of Florida Hilton Hotel

Room reservations cut-off date: **October 10, 2006**

Rates: November 9th.....\$139/night

November 10th and 11th.....sold out

Additional Hotels with DFW Room Blocks

*Best Western Gateway Grand(352) 331-7103

Fairfield Inn(352) 332-8292

Hampton Inn(352) 371-4171

Paramount Plaza(352) 377-4000

Quality Inn(352) 378-2405

** Requires Gator Football 2006 Room Reservation Form*

For More Information

Contact Alumni Affairs

Coordinator Sue Guido at (352) 273-5781

or aguido@dental.ufl.edu





WEEKEND

Continuing Dental Education

The Most Important Topics in Dentistry — 2006

Presented by Gordon J. Christensen, D.D.S., M.S.D., Ph.D.

What's new? What's just hype?

What's important?

This popular course is a concise, pragmatic appraisal of many current popular techniques, materials, devices, concepts and controversies in dentistry. *Motivational, humorous, educational, and full of practical "take home" information!*

Gordon J. Christensen has presented over 40,000 hours of continuing education throughout the world and has published hundreds of articles or books. He is the founder and director of Practical Clinical Courses, an international continuing education organization for dental professionals.

Dr. Christensen is an adjunct professor at Brigham Young University, a clinical professor at the University of Utah. In addition to his education pursuits, Dr. Christensen practices in Provo, Utah.



Throughout his distinguished career, Dr. Christensen has earned numerous professional degrees and honors, some of which include: D.D.S., University of Southern California; M.S.D., University of Washington; Ph.D., University of Denver. He is a diplomate of the American Board of Prosthodontics, a fellow and diplomate in the International Congress of Oral Implantologists. He is a fellow in the Academy of Osseointegration, American College of Dentists, International College of Dentists, American College of Prosthodontists, Royal College of Surgeons of England, and American Academy of Implant Dentistry.



Message from AA&F President Gregory Reddish

Dear UFCD alumni and friends,

As you may know, the Academy of Alumni and Friends was founded through the joining of The Academy 100 and the UF Dental Alumni Association in 2002. The Academy of Alumni & Friends carries on both organizations' philanthropic principles and strong desire to support dental education in Florida.



In the 30 years since the Charter Class of 1976 graduated, our college has become a national leader in dental education. Just as the UF College of Dentistry has grown over the years, so have philanthropic opportunities. In the past we have supported the college through gifts to the Academy 100 or the Dental Alumni Association. Now, there are more than 50 separate funds supporting the specific needs of general and specialized dental education, community service and research.

This year, to promote unity among alumni and friends and to clarify the philanthropic role of the Academy of Alumni & Friends, the AA&F Board of Directors developed and approved a plan to change our structure from one of membership defined by payment of annual dues to one of automatic inclusion without dues for any and all college alumni and friends.

To provide a way for alumni and friends to continue to support and enhance the educational experience of our D.M.D. students, we elected to replace dues with an AA&F annual giving campaign and initiated the Alumni Affairs and Student Activities Fund.

This fund is designed to support the operating budgets for student organizations, scholarships, special events, academic enhancement programs, as well as alumni events such as Dental Fall Weekend and our FNDC reception.

For convenience, the Alumni Affairs and Student Activities fund offers a choice of giving levels with a variety of easy payment options. Also, the board voted to change the campaign year from Jan. 1 – Dec. 31 to July 1 – June 30.

The new AA&F annual giving campaign kicked off in May 2006 with a mailing to all of our alumni and friends, with the campaign goal of raising \$100,000 to nurture, enhance and elevate our students' dental education.

Please join me in renewing your annual gift. Together we are empowered to meet the challenges facing dental education and contribute toward keeping UFCD at the leading edge of dental education!

I look forward to seeing you at Dental Fall Weekend 2006!

Gregory D. Reddish, D.M.D.,
Epsilon Class of 1980
Academy of Alumni and Friends,
President 2006-2007

FNDCC 2006

UFCD Alumni & Friends Reception at Florida National Dental Congress, June 14 – 17, 2006, Gaylord Palms Resort, Orlando, Fla.



1. Dorma Stanley (left), widow of UFCD Professor Emeritus Harold R. Stanley, visits with UFCD Development Director Catherine Jenkins and Associate VP for Health Science Center Development Jancy L. Houck. Mrs. Stanley attended FNDCC to represent the Stanley Family during the Harold R. Stanley Memorial Lecture, presented June 17 by Professor of Oral and Maxillofacial Pathology Donald M. Cohen.

2. Pretty in pink, the Ferlita Family: (from left) Taylor (6), David ('93), Bailey (5), Christine and Dawson (2).

3. Charles Ross (left), a member of the UFCD Hialeah Dental Clinic advisory board since 1995, and Alfred Underwood Jr., Academy 100 member since 1995 and now a friend in the Academy of Alumni & Friends, enjoy hors d'oeuvres and conversation with Clinical Associate Professor David

K. Stillwell and Florida Dental Association Director of Dental Care and Education Robert M. MacDonald.

4. Sherri Liddell, Rudy Liddell ('82), Teresa Dolan, Mike Liddell (17) and Brian Liddell (13).

5. James E. "Eddie" ('87) and Angela Martin of Pensacola. Martin serves as the Northwest Florida representative on the board of the Academy of Alumni & Friends.

CASE OF THE MONTH



By Donald M. Cohen, D.M.D., M.S., M.B.A., & Indraneel Bhattacharyya, D.M.D., M.S.

Case of the Month is presented by the University of Florida College of Dentistry Oral Pathology and Diagnostic Services. Cases are actual clinical presentations submitted by private dentists or seen in college clinics. Additional cases are available online, free of charge, at www.dental.ufl.edu/caseofthemonth

This 62 year old male presented to the UFCD undergraduate treatment planning clinic for multiple fillings in his teeth. Clinical examination revealed severely hyperplastic mandibular gingiva involving both sides of the arches, specially pronounced in the anterior segment. The maxillary arch was minimally involved. The patient's plaque control was moderate; however, there were multiple decayed teeth. The patient's medical history includes medication for treatment of hypertension.

What is the most likely diagnosis?

- A. ANUG
- B. Mouth breathing associated gingival hyperplasia
- C. AIDS-associated periodontal disease
- D. Nifedipine-induced hyperplasia
- E. Plasma cell gingivitis

Answers.

- A. Incorrect.** ANUG is associated with destruction of tissues and classically presents with "punched" out lesions of gingival papilla and is often accompanied by systemic features such as lymphadenopathy, fever and malaise.
- B. Incorrect.** Mouth breathing often exacerbates gingival hyperplasia induced by medications but by itself seldom causes significant enlargement.
- C. Incorrect.** AIDS-associated periodontal disease is like ANUG and presents with destruction of bone and gingival tissues.

D. CORRECT. The patient's medications for treatment of hypertension include nifedipine – a calcium channel blocker, which causes gingival hyperplasia in 20-25 percent of the patients. Some of the other calcium channel blockers such as amlodipine (Norvasc®) and diltiazem (Tiazac®) have also been implicated but to a much lesser degree.

E. Incorrect. Plasma cell gingivitis presents with diffuse generalized gingival edema with a characteristic erythema and loss of stippling. It is often the result of contact allergy with flavoring agents and preservatives such as cinnamon.

Which of the following medications are implicated in causing gingival hyperplasia?

- A. Phenytoin sodium
- B. Nifedipine
- C. Cyclosporine
- D. Amlodipine
- E. Primidone (anticonvulsant)
- F. **All of the above - CORRECT**

To test your diagnostic skills against additional cases, visit www.dental.ufl.edu/caseofthemonth. If you have a case you would like to submit, call Donald Cohen at (352) 392-2508, email dcohen@dental.ufl.edu or mail to Diagnostic and Pathology Services, UF College of Dentistry, P. O. Box 100416, Gainesville, Fla. 32610-0416.



ALAN & JEANNE HAY
CHARTER CLASS



Future Brads!



KATHY "THEO" BOILLOT



CHRISTIE LaTulippe '97

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