Contact
A Publication of The University of Alabama School of Dentistry

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DENTAL DYNAMICS
New Tools for a Better School

NEW DIAGNOSIS FOR OSTEOPOROSIS
Dental Predictors of Bone Loss in the Body

PROTECTION FROM INFECTION
Safety is Central to Successful Exams
Hello, and welcome to the inaugural edition of Contact, the magazine of the University of Alabama School of Dentistry. Contact will be published twice each year and is meant to supplement our DentAlumni newsletter with expanded information about the school—specifically our alumni, students, faculty, and friends. In these pages we hope you will find news that you can use and information that will help you better serve your patients. We hope the discoveries in our clinics and laboratories will quickly find their way to your treatment rooms, and we also will share news from the front lines of dental practice in features highlighting the outstanding work of our alumni as they improve the oral health of their communities.

In this issue you will read about new advances in dental materials, diagnostic procedures, practice management, infection control, and cancer prevention. You will get to know more about our school’s researchers, who count you among their partners in the discovery of new knowledge. I encourage you to contact these outstanding scientists to share your insights and views.

We are also pleased to share with you news of the renovations that are now underway at the School of Dentistry. While we’ve already completed the first phase—and work on Phase II is now in progress—we’re delighted by the response we received by those of you who attended our annual alumni weekend last February. The improved waiting areas, business offices, and dental clinics will make visiting the school much more pleasant for our patients, and the new high-tech classrooms will improve the learning experience for our students. Expanded and upgraded research facilities are also on the drawing board as part of the third phase of renovations. Please read the cover story in this issue of Contact for all the details on this exciting project.

We are proud of the new generation of practitioners and scientists that are being trained in our newly renovated and improved facilities. We are also proud to share with you the many ways in which our graduates are giving back to their profession, to the community, and to their school. Let us hear from you. Your ideas about how we can do a better job in serving you and our fellow citizens are important to us.

We invite you to share your successes with us so that they can be featured in future issues of Contact.

Sincerely,

Mary Lynne Capilouto, D.M.D.
Dean, University of Alabama School of Dentistry
News about the accomplishments, awards, honors, grants, and research findings of the students and faculty of The University of Alabama School of Dentistry.

Dental Dynamics—Renovations to the school mean better care for patients, improved preparation for students, and more efficient workspaces for teachers and researchers alike.

Advents in Implants—Better materials, improved techniques, and greater understanding of oral physiology are having an impact on the science of implantology.

New Diagnosis for Osteoporosis—A “first of its kind” seven-year study proves the connection between osteoporosis and periodontitis, leading to improved diagnoses.

Healthy Practices—A basic understanding of business principles such as information systems and accounting helps grads get off to a better start in their careers.

Too-Tender Teeth—Many people can’t enjoy their favorite foods because of sensitive teeth, but new topical desensitizers can instantly eliminate the pain.

Taming the Craving—While smokeless tobacco isn’t a healthy choice, it’s an option for smokers who want to kick the habit, says one researcher.

Masterful Methods—Technological advances and improved techniques are leading many dentists to consider subspecialization.

Protection from Infection—Being sure to take the proper safety precautions during dental examinations protects the patient as well as the practitioner.

Feature stories on some of the school’s outstanding faculty. In this issue, meet Leonard Mueninghoff, Yihong Li, and Milton Essig.

Profiles of selected students—in this issue, Nancy Hein, Eric Green, and Ruth Aponte-Parra.

Articles on alums who have made marks in their fields. In this issue, catch up with William Beall, Anissa B. French, and Robert Holt.
Dentistry Ranks Highly in NIH Funding

According to figures released by the National Institutes of Health (NIH), the University of Alabama School of Dentistry has been ranked 19th among U.S. dental schools in terms of funding received during the 1999 fiscal year. The dental school is ranked seventh by the National Institute of Dental and Craniofacial Research.

During that same period, UAB received more than $150 million from the NIH—an increase of more than 13 percent from the previous year. The amount places UAB at 18th in the nation and third in the Southeast, behind only Duke University and the University of North Carolina at Chapel Hill.

Four other UAB schools also are ranked among their peers in NIH funding. They include: Health Related Professions, (second); Public Health, (14th); the School of Medicine, (16th); and the School of Nursing, (50th).

Weems Selected to Elite Disaster Response Team

Richard A. Weems, D.M.D., M.S., associate professor of diagnostic sciences and director of student and alumni affairs, has been selected as a dentist member of the Disaster Mortuary Operation Response Team, or DMORT. The team is part of the National Disaster Medical System, and it also responds to the authority of the National Transportation Safety Board (NTSB).

“DMORT is an elite group of qualified professionals whose task it is to recover, identify, and process victims of mass disasters nationally and internationally,” says Weems. “Professional members are considered pre-registered federal employees, and their licenses and certifications are recognized by all states when any or all of the six regional teams are activated.”

Regional team training exercises are conducted twice annually, and a national meeting is held once a year, according to Weems.

STUDENTS HONORED WITH NIH RESEARCH EXPERIENCE

Two sophomores in the D.M.D. Program were invited to conduct research at the National Institutes of Health last summer. They were part of a group of only 10 students from six schools of dentistry across the country to receive this honor in 1999.

Nathan Redmond and David Roden—who were freshmen at the time they submitted their application—traveled to NIH headquarters in Bethesda, Maryland, according to Merrie Ramp, D.M.D., an assistant professor in the Department of Restorative Dentistry.

“This is quite an honor, both for the students and for UAB,” she says. “It’s a feather in our cap to have two of our students—as well as the School of Dentistry—recognized in this way.”

Lemons Participates in Technology Conference

Jack Lemons, Ph.D., a professor in the Department of Biomaterials, recently participated in the National Institutes of Health’s Technology Assessment Conference. The meeting is held to bring together biomedical investigators, practicing physicians, consumers, and others to review and evaluate the scientific soundness of a variety of health-related technologies. The conference also provides physicians and consumers with information regarding the safety and effectiveness of drugs, devices, and procedures.
The School of Dentistry at UAB recently traveled to Meikai University in Japan for a weeklong stay. The seniors toured the school’s facilities and met with Japanese dental students and faculty, according to Steven Filler, D.D.S., who accompanied them on the trip. "Meikai sent us 10 students and two members of their faculty last summer and will do so again this August," says Filler, who is a professor and director of student admissions and hospital dentistry. "This is a great opportunity for our students to interact with fellow professionals on an international basis."

The seniors who took part in the trip are John Caprara, Vicki Mayo, Lindsay Barber Pope, and Ross Russell. Meikai University is located about 30 miles outside Tokyo.

The 16th International Conference on Oral Biology, held last April at the Westfields Marriott in Chantilly, Virginia, presented many with the opportunity to bid farewell to Britta Mansson-Rahemtulla, D.D.S., M.S., Dr. Odont., who passed away on January 16, 1999. She was a faculty member of the School of Dentistry at UAB and wife of Professor and Director of Graduate Programs Firoz Rahemtulla, Ph.D.

In conference literature, director Lawrence A. Tabak, D.D.S., Ph.D., of the University of Rochester, wrote: "The conference also provides us with an opportunity to say goodbye to one of our own, Dr. Britta Rahemtulla. We will miss her scientific insight, collegiality, and remarkable spirit. We hope that the investigators brought together in this conference will follow in Britta’s footsteps in the years to come."

Speaker Henning Birkedal Hansen, D.D.S., M.S., formerly assistant dean and chair of the Department of Oral Biology at UAB and currently director of Intramural Programs at the National Institute for Dental and Craniofacial Research, said, "Over the years Britta touched and influenced many people’s lives. Everything she did was of substance and quality. While often given to lighthearted joking and fun, Britta displayed an unusual sincerity, seriousness, and commitment in everything she undertook," he said.

“She was a true professional in every good sense of the word.”

Michael H. Martin, a graduate student in the Department of Microbiology’s Cellular and Molecular Biology Program, has won the Hatton Awards competition at the recent meeting of the International Association for Dental Research (IADR) in Washington, D.C. His entry was titled “Immunostimulatory Activity of CT- and LT-Ila-based Chimeric Proteins,” according to Michael W. Russell, Ph.D., research professor of microbiology and oral biology.

“This is part of Michael’s dissertation research project, which itself is part of a larger, longtime study in my laboratory that is aimed at developing a general strategy for oral immunization,” says Russell, who is principle investigator in the Mucosal Immunology Research Group. “This particular application is to develop a novel type of vaccine that would suppress oral colonization by Streptococcus mutans, the causative organism of dental caries, by inducing high levels of antibodies in saliva.”

The Hatton Awards are for junior predoctoral or postdoctoral investigators in dental research whose work is first considered at the national level. Winners in the various national divisions then progress to the international competition. Martin placed first in the AADR competition and then went on to win the IADR competition.

Ananda Dasanayake, B.D.S., M.P.H., Ph.D., recently made a presentation to the annual Research Day Meeting of the Southeastern Regional Research Center for Minority Oral Health at Meharry Medical College in Nashville. The topic was multi-center research into the immune response of pregnant women to specific periodontal pathogens and low birth-weight in infants.

“Disorders relating to short gestation and low birth-weight are among the leading causes of death in infants,” says Dasanayake.

An associate professor of oral biology and director of the Dental Research Clinic in the Specialized Caries Research Center, Dasanayake is co-investigator with others from universities including UAB, Meharry, and the University of North Carolina at Chapel Hill.
Anyone who has passed by the dental school recently has noticed striking changes—the orderly landscaping, for instance, the airy new entrance, the spacious drop-off and pick-up point for patients. What the casual observer cannot know is that these physical improvements are meant to mirror the core philosophy of the school.

“A compassionate approach to dentistry has always been an important part of the training we provide,” says Dean Mary Lynne Capilouto, D.M.D. “And so it made perfect sense for the first phase of our renovations to focus specifically on improving patients’ experiences when they visit us. We feel that by placing an emphasis on patient care, we encourage students to develop that attitude from the first day of their training.”

Relocate or Renovate?
In the early ’90s, it became apparent to school administrators that changes were needed. While dental examination chairs have an average useful life span of 10 or 12 years, some of the school’s chairs were more than 20 years old. And that was just the tip of the iceberg, according to Michael S. Reddy, D.M.D., assistant dean for planning and clinical activity.

“We knew that it was time to breathe new life into the school, but there were a great many questions that had to be answered before we could proceed.” The main question, he says, was where and how this would take place: “Would we build a new school in a different location in order to make things easier for our patients and faculty, but lose our place in the heart of the Medical Center? Would we build additional quarters somewhere on campus and split up the clinical and research units? It really came down to the faculty’s conviction that one of our major strengths is our central position within the medical enterprise, and so the decision was made to stay.”

With the matter of the school’s location settled, it was time to focus on equally important issues, such as the direction it should take. “We were looking at everything, not just the building,” says Reddy. “We wanted to find a way to make everything work together in a simple, seamless operation.”

A Study in Streamlining
With shortages in state funding, as well as increasing competition for research dollars, a steady flow of patients has become vitally important to the School of Dentistry. And the more patients who pass through the clinic, the more experience the students gain, which better prepares them to enter the profession. Clinic patients benefit, too, from the cutting-edge treatment they receive. But while more patients getting better treatment from faculty and students is an excellent scenario, one thing has been missing from this equation.

“Patient access,” says Reddy. “It was a complicated and confusing process just for patients to get in the place. We knew that if we were going to begin focusing more of our attention on the patients’ experience, then we were going to have to change the building itself.”

Visitors to the dental school in the past will recall a rather cramped entrance leading to a
to what form the new facade should take. “We wanted to remain true to the original design of the building,” he says, “which is a simplified version of a design known as Art Deco.” The firm then determined what details and materials would best complement the existing structure. “We decided to go with limestone on the lobby floors and metal panels for the facade. We also decided to shift the entry from the left wing, where it had been located, to the main building, which just made more sense.”

As for the lobby and classroom areas, there were plenty of surprises buried in the walls, says Project Manager Hank Houser. “Some of the original architectural drawings for the building are dated 1949, while others say 1950,” he says, “so there’s a little confusion there. Plus the plumbing systems had been renovated since that time, and for many years maintenance workers had simply tied new equipment into the water line without marking it on the drawing, so we were continually faced with challenges.”

When their work was done, however, the architects felt certain that they’d achieved their goals. “The old entrance was fairly heavy in appearance, stained by years of use and exposure, and it was dark once you were inside,” says Houser. “But the new entry is airy and light, less confusing, and it certainly makes a better first impression.”

A Logical Layout
Reddy agrees: “The architects did a great job of listening to our needs and incorporating them into the design,” he says. “The entire facility is now much improved in terms of the patients’ as well as the students’ experience.”

For the patients, the new lobbies, waiting

foyer that was actually split between two floors. Patients, some of whom were already unnerved by the spectre of a visit to the dentist, were further rattled by difficulties associated with simply navigating the building.

“No one should have to work that hard just to make it to an appointment,” says Reddy, “and you shouldn’t have to search for the business office when you want to discuss your account, either. We realized that, if we wanted a streamlined process, we first had to create a space where such a thing could exist.”

The Architecture of Access
After a lengthy bid process, the project was finally awarded to Lord, Aeck, & Sargent—an Atlanta architectural firm with a great deal of experience in working with universities and medical institutions. “About a third of our business has to do with historic preservation,” according to Terry Sargent, a partner in the firm, “with the remaining two-thirds devoted to science, technology, and university design.”

Once they had met with the school’s steering committee to get an idea of their concerns, Sargent and his colleagues turned their attention

PHASE I—Only recently completed, this phase revamped patient waiting areas, business offices, administrative offices, and also the general clinics. In addition, new equipment was installed in the lecture halls, where computers now play an active role in classroom presentations.

PHASE II—Just beginning, this phase will bring improvements to the hands-on student facilities in which dental techniques are practiced at individual workstations. All stations will be wired to allow students to plug in their laptops to access the school’s Web site, class plans, clinical records, and even streaming video.

PHASE III—This phase will bring the same level of technology featured in the classrooms into the research laboratories, providing state-of-the-art facilities for the school’s scientific enterprise. This investment in research should attract more outside funding.

Contact 5
Contact areas, and business offices are laid out in a logical manner, in spaces that are both pleasant and easy to locate and navigate. In addition to improved aesthetics, patient-care coordinators are located near the second-floor waiting areas to guide patients through the process. "They are patient advocates who manage the relationship between the patients and the students to whom they've been assigned," says Reddy. "It makes the whole process go more smoothly for everyone involved."

As for the students, new, specially designed ambidextrous examination chairs were installed in the general clinics, and high-tech teaching auditoriums were assembled throughout the building. From a module in each classroom, an instructor can demonstrate techniques on a dental model and project the clear, video-quality image onto a large screen at the front of the room. The module is also equipped with a powerful Macintosh computer for making PowerPoint presentations, and VCRs for projecting videotapes onto the screen. This can be compared to the days when demonstrations were beamed from a small television studio located within the dental building. "That was definitely state-of-the-art at the time, but this is a vast improvement," says Reddy. "It's equipment and innovations such as these that help place us well ahead of the teaching curve."

**Technological Trendsetters**

While these improvements, representing Phase I of the ongoing project, were devoted mainly to patients, the second phase will focus specifically on improving the student-training areas. This phase will involve massive restructuring of the areas, and business offices are laid out in a logical manner, in spaces that are both pleasant and easy to locate and navigate. In addition to improved aesthetics, patient-care coordinators are located near the second-floor waiting areas to guide patients through the process. "They are patient advocates who manage the relationship between the patients and the students to whom they've been assigned," says Reddy. "It makes the whole process go more smoothly for everyone involved."

According to Johnny Wang, D.D.S., a clinical assistant professor in the Department of Periodontics, all examination chairs are not created equal. "We've had more than 100 chairs installed throughout the dental school's clinics and in some of our specialty clinics, as well," he says. "But these chairs are really quite different from the ones we've used in the past. The improvements are quite dramatic, in fact."

Designed by Adec at a cost of more than $15,000 each, the examination chairs have certain features that might seem like common sense. They are "ambidextrous," for example, with the control panel mounted on a radial arm that allows the dentist or hygienist to approach the patient from either side of the chair. "Although it might not seem like such a big deal at first, the more comfortable the dentist is, the more smoothly and efficiently the examination will proceed," says Wang.

Of particular importance is a special reservoir connected to the water line, allowing for periodic flushing to eliminate bacteria buildup. "The water quality in the dental school—and throughout the city of Birmingham, in fact—is above the national average in terms of purity and overall quality," says Wang. "This has been of particular interest to the national media lately, but we've been testing our own water for quite some time now."

Wang says other special features include a tilting footrest that lifts the patient's feet and reduces lower back strain during extended visits. "The control panel also has a 'reline' feature that prevents damage from multiple users," he says.
current work areas to allow for the introduction of new technologies, Reddy explains. “We’re basically going to gut that area so that we can run fiber optics and new wiring that will completely change the way our students train,” he says.

Although entering students are already required to have computers with certain specifications such as Web access—the dental school being the first on campus to have this requirement—by the year 2002 it will be mandatory that students matriculate with laptops. This will open the door to a whole new academic experience, says Reddy.

“Once we have the training space rewired and the learning research area in place, students will be able to sit down in their modules, plug in their laptops, and access everything from clinical patient records to class plans to streaming videos demonstrating the procedures they’ll be practicing on models,” he says. “We want them to have all the information they need on CD-ROM and also on a school Web site with security access. That way they can pull up information at home, in the classroom, in the modules—anywhere they may be.”

Reddy sees a training area teeming with students with a central dais from which instructors can communicate with the entire classroom at once or with individual students via laptop monitors and speaker headsets. “Instead of demonstrating the same procedure 10 times for 10 students each, the faculty will be able to concentrate and individualize their efforts.”

Once the student areas have been completed, the next phase of the project will involve a complete renovation of the seventh-floor research areas, bringing the same level of technology and efficiency to the school’s scientific enterprise.

**Investments in Excellence**

Established in 1948, the School of Dentistry at UAB is one of the oldest and most widely known on campus. Two of the university’s five presidents have emerged from the dental faculty, and countless dentists now practicing throughout the state, nation, and the world have passed through the halls of this building. There is a certain responsibility attached to such a reputation, according to Capilouto—also a graduate of the school.

“I can attest to the fact that, if you’ve trained here at UAB, you’ve received the best dental education that’s available anywhere,” she says. “While these renovations have been costly, we consider them to be an excellent investment in our future. We expect a major return in terms of the pride our alumni and faculty feel, and the continued excellence of the training our students receive.”
AS LONGER LIFE SPANS lead to larger populations of older adults, advances in implant technology have become increasingly important. Fortunately, a number of major breakthroughs have been made of late, promising a whole new generation of dental implants.

“With all the new techniques, designs, and materials that are being introduced, dental implants are being used more often and with a greater degree of safety, efficacy, and effectiveness than ever before,” says Jack Lemons, Ph.D., a professor of biomaterials in the School of Dentistry at UAB.

Good to the Bone

“Biomaterials have been used for many years in implantology and continue to be used a great deal,” says Lemons. “Even though there are new materials in development, the most important point is that we’re expanding and finding new uses for what we’ve already used safely.”

One consideration that must be taken into account when designing dental implants is the condition of the bone beneath the gums, which can be soft and porous. This can lead to instability and loosening of the implant. One way around this problem is to use methods that lead to compression and maturation of the bone, which increases density at the actual implant site. “This creates a more stable foundation for anchoring the screw-threaded implants, to which prosthetic-restoration materials such as porcelain can then be attached,” says Lemons.

Enhancing the Healing

In addition to improved techniques, new materials are also being developed. “As we learn more about how teeth are anchored, how they are used, and the differences between natural materials and implants, we’re constantly looking for materials that closely mimic the original,” says Lemons.

He says that another goal is to shorten the period between implantation and use: “A standard technique involves the dentist introducing the implant and allowing it to exist passively in the jaw for as long as six months, protected by a denture-like covering while the jaw heals and the soft tissue closes over the implant,” he says. “Once ‘osseointegration’ has occurred between the implant and the bone of the jaw, the dentist then exposes the top of the implant and does the restorative work, which might set the completion of treatment back a few months.” These days, many are investigating new techniques that allow implants to be brought into full function much more quickly, according to Lemons. “In weeks as opposed to months, in fact.”

Maintenance Matters

Lemons cautions that getting a dental implant isn’t the same thing as buying siding for your house—the same maintenance will be required for your teeth as before.

“Although researchers are developing pharmaceuticals that will protect against periodontal disease, it’s still important for patients to take care of their teeth,” he says. “Space-age materials and design don’t mean that proper maintenance has been thrown out the window.”

Lemons can be reached at (205) 934-9206 or [jack.lemons@ortho.uab.edu].

By Rhonda Sessions Gregg

Jack Lemons is a recognized authority in the field of implantology.
OSTEOPOROSIS AND PERIODONTITIS are both “silent diseases,” according to Marjorie Jeffcoat, D.M.D., because neither causes recognizable symptoms until late in the disease process. And they share several risk factors, she says, including reduction in bone mass. Could there be more connections?

“We think it’s possible that the oral bone loss associated with periodontal disease is related to the systemic conditions that predispose people to osteoporosis, so we decided to try and establish a clinical connection,” says Jeffcoat, who is Rosen Professor, chair of the Department of Periodontics at UAB, and the newly installed president of the International Association for Dental Research (IADR).

Inquisitive Initiative
The link between oral and systemic bone loss seemed logical to Jeffcoat, but she knew that a great deal of data would be required to prove her hunch scientifically. In search of this proof, she launched a seven-year oral ancillary study as part of the Women’s Health Initiative—a nationwide, federally funded study of women’s health after menopause. She points out that this study will help “make it possible to determine if the progression of periodontal disease is more rapid in patients with osteopenia, or skeletal bone loss, than in patients with normal bone density.”

“In collaboration with the Department of Preventive Medicine, we began recruiting women to take part in the study in late 1995,” says Sandra Haigh, clinical research coordinator. “Since then, we’ve enrolled 461 postmenopausal women from across Alabama, and we’re currently in the process of completing the second of three evaluations on each of the subjects.”

The subjects deserve a great deal of appreciation, says Haigh: “After obtaining their informed consent, we did a soft tissue/salivary gland exam, as well as a randomized, half-mouth periodontal evaluation on each subject,” she says. “There’s so much we need to know, and it’s taken a lot of patience on their part to help us accumulate this data.”

Research Relationships
On the technical end, scientists conducting the study use digital subtraction radiography methods to measure oral bone density and Dual Energy X-ray Absorption (DXA) scans to measure systemic bone density.

It is crucial to track and retain all of the subjects for the seven-year duration of the study. “We’re doing all we can to keep in touch with each of the women during the three-year periods between evaluations,” Haigh says. “It’s important to maintain our relationship, and I guess it’s true that we’ve all really become friends.”

Density Data
At this stage in the study, the researchers can report that preliminary results do indeed show significant correlations between the bone mineral density in the mandible, or jaw, and the hips of the patients enrolled in the study.

“While these results represent only a subset of the total study population, they indicate that there is indeed a relationship between periodontal disease and osteoporosis,” says Jeffcoat. “Our next step will have implications for treatment of bone loss and cariology.”

For more information, contact Jeffcoat at (205) 934-1092 or [jeffcoat@uab.edu].
Healthy Practices

Business Principles Streamline the Bottom Line

SHE WAS TOPS in her class, a dental student who had the golden touch when it came to her grasp of the techniques, her manual dexterity, her winning personality, and her empathy with patients. Yet she was totally unprepared to enter the profession on the day after graduation. Why? Because she hadn’t been trained in the actual business of dentistry.

“The skills of the profession are the most important thing we teach, of course,” says Kent Palcanis, associate dean for academic affairs, “but it’s crucial to have at least a basic understanding of concepts such as management, marketing, and finance before you enter private practice—whether you’re beginning as an associate or building a practice from the ground up. That’s what we attempt to provide through our practice management courses.”

For the past five years, Palcanis has been charged with finding effective and creative ways of preparing dental students to launch careers of their own after graduation. Through his two senior-level practice management courses and annual two-day seminar, students learn the difference between associateships, partnerships, group practice, and private ownership—and if the latter is chosen, how to make that business a success. Topics covered in the course include staffing an office, marketing a practice, and managing finances, as well as ethical and legal considerations. Rather than attempting to address these issues himself, Palcanis decided to invite practicing dentists and other professionals to provide students with their insights. One of these is Wes Samford, D.M.D., a 1973 graduate of the dental school.

“My goal is to provide students with a basic understanding of dental management,” says Samford, “so that they’ll be able to make informed decisions from the very beginning of their careers.”

One of the most important decisions new dentists have to make, Samford says, is whether to sign on with an existing practice or begin a new one. Since capital is always a concern, he suggests to students that they consider an associateship—for the first few years, at least.

“This alleviates capital concerns and allows the beginning dentist to learn from experience,” says Samford, who spent two years as an associate himself before beginning his own practice in 1975.

Samford says his own experience was typical of any beginning business. He first wrote a business plan—with the help of colleagues who had already navigated those waters themselves—and took it to the bank, where he not only landed a loan but an advisor as well.

“I approached people who possessed the knowledge that I needed and asked them to be part of my team,” he says.

“My banker had a stake in my success, of course, and I also contacted an accountant and a lawyer, asking them to invest their time and expertise in my potential success.”

In addition to the basic principles of business management, Palcanis seeks to expose dental students to a variety of other business topics that will serve them well in their careers. Not only do students learn about chemical hazards and federal regulations, but they also explore issues such as ethics, health-care delivery systems, the economics of managed care, and how to analyze managed-care contracts.

“I decided to find experts in these areas who would be willing to come in and make presentations,” he says, referring to the attorneys, bankers, and even OSHA representatives that he invites into his class. “I thought it would be valuable for the students to gain the perspectives of people who are involved in other lines of work—especially occupations and professions that have an impact on dentistry.”

By Russ Willcutt

Too-Tender Teeth

Topical Desensitizer Purges the Pain

A MAN CRINGES as he sips a cold drink. A woman winces as she bites down on a sugary snack. A child can’t enjoy an ice-cream cone at the park with his friends. Such is the painful reality for millions of Americans who suffer from tooth sensitivity.

Although it’s one of the most common dental complaints, sensitivity to air, cold, and even sweets has historically been difficult to treat. But thanks to research conducted by Charles Cox, D.M.D., and his colleagues in the Department of Biomaterials at UAB, patients with tooth sensitivity can now find relief in a convenient and often permanently effective solution.

According to Abeer Hafez, a research associate who works with Cox, the two common varieties of dental pain are sensitivity in the pulp, and pain that relates to a fluid-flow problem in the
Taming the Craving

Smokeless Tobacco Quenches the Flames

BRAD RODU, D.D.S., spent the first 15 years of his career treating the dental problems of cancer patients. “Between 1979 and 1994 I saw literally hundreds of lung-cancer patients,” says Rodu, a professor of pathology in the School of Dentistry and senior scientist at the Comprehensive Cancer Center at UAB, “and it motivated me to search for ways to help reduce the harm caused by smoking tobacco,” he says.

During that same period, in 1993, Rodu read a statement by then-U.S. Surgeon General Antonia Novello, who warned that unless the use of smokeless tobacco was curtailed, the United States would experience an epidemic of oral cancer.

“I wasn’t aware of this ‘impending epidemic,’’ says Rodu, ‘so I decided to find out more about smokeless tobacco and to compare its physiological effects with those of smoking cigarettes.”

Contrary to Novello’s dire prediction, Rodu and his colleagues—UAB assistant professor of pathology Nadarajah Vigneswaran, D.M.D., Ken Tilashalski, D.M.D., an instructor in diagnostic sciences, and Philip Cole, M.D., Dr.P.H., Professor Emeritus in the Department of Epidemiology—found that mortality data from populations with sustained high-frequency use of smokeless tobacco do not indicate a potential epidemic outbreak of oral cancer. They also found that the risk of oral cancer from using smokeless tobacco is about half that of smoking cigarettes. These findings led them to consider smokeless tobacco as a less harmful alternative to smoking.

“The nicotine in tobacco is an addictive agent, but it doesn’t cause death,” Rodu says. “Burning tobacco produces about 3,000 byproducts that can cause cancer, heart disease, emphysema, and other life-threatening illnesses. So, while nicotine is the reason people smoke, it is not the reason people die.

“Just as people ‘safely’ use caffeine, which in many ways is very similar to nicotine, we wanted to find a way for inveterate smokers to use nicotine ‘safely,’” he says.

In order to do so, Rodu, Tilashalski, and Cole designed and conducted a clinical pilot study on their smoking-cessation strategy using smokeless tobacco, which provides the nicotine kick smokers crave but is 98-percent safer than smoking. They invited 63 inveterate smokers, who had not been able to quit using the conventional methods of abstinence or nicotine gum or a patch, to use “spitless” snuff instead of cigarettes. After using smokeless tobacco for a year, 25 percent of the subjects had quit smoking, and an additional seven percent had cut their cigarette consumption in half.

While Rodu is quick to point out that using tobacco in any form is a health risk, using smokeless tobacco “reduces the smoker’s risk for all tobacco-related illnesses and produces no new risks,” he says. He also notes that smokeless tobacco eliminates the harmful secondhand effects caused by smoking.

For more information, please visit Rodu’s Web site at [www.dental.uab.edu/www/oralpath/FSO.html].

By Rebecca McCracken

Contact 11
WHEN MARK McGWIRE steps up to the plate, no one expects him to bunt. In fact, the crowd wants to watch him hammer another homer with the powerful swing that’s made him famous. In this way, the home-run king could be thought of as a subspecialist—a good player who excels at knocking balls out of the park.

Examples of subspecialization can be found in every profession, from the English professor who leans toward Shakespeare to the materials engineer who focuses on producing ternary alloys. In the field of cosmetic and restorative surgery, the concept is quickly gaining momentum.

Surgical Assurance
“There’s a trend toward subspecialization in order to improve the quality of care patients receive and also to assure safe outcomes,” says Peter Waite, M.D., D.D.S, professor and chair of the Department of Oral and Maxillofacial Surgery in the School of Dentistry at UAB.

Waite says that, as in other fields of health care, subspecialties in dentistry have tended to evolve along with the explosion of new technology. “A dentist who is an oral surgeon may become interested in a more focused area and begin to concentrate on dental implants, for instance,” he says. “Or on facial trauma, oral cancer, or facial cosmetic surgery.”

Team Treatment
As past president of the American Academy of Cosmetic Surgery (AACS), Waite says he’s been involved in an organization of diverse specialists who join together to serve the patients they mutually treat. “The AACS sponsors multidisciplinary programs with plastic surgeons, ophthalmologists, dermatologists, and professionals from many other specialties,” he says.

Waite, whose background includes degrees in both dentistry and medicine, describes his role in such an effort. “As an oral and maxillofacial surgeon, I’ve dedicated my life to concentrating on one area of the anatomy—the face,” he says. “I’ve studied the growth of the face, the growth of the jaw, and the relationships of the bones, muscles, and soft tissue. If someone is in an accident and has teeth knocked out, we perform reconstructive surgery. We have to repair the skin and rebuild the structure of the bones of the face.

“Like building the foundation of a house, we build the foundation first,” he says. “After setting bones in their proper position, we address mastication, or the ability to chew. Finally, we try to put cosmetic touches to the face.”

The adage “practice makes perfect” is especially true in this case, according to Waite. “The specialist who performs the same procedure frequently is usually going to get better, more predictable results in less time,” he says. “And if the job is completed more quickly, it’s probably going to cost the patient less money.”

Nothing to Hide
In the end, the decision to choose a generalist or a subspecialist is still up to the patient, according to Waite. “And the best way to make that decision is by asking the right questions,” he says. “How many procedures has he or she done? Can former patients provide feedback on surgery results?

“After all, most of us would ask similar questions if we were interviewing babysitters for our children or nurses to take care of our mothers,” he says. “All professionals should have proof of their expertise.”
The image of the nervous patient cautiously approaching the dental chair holds an established place in America’s collective consciousness, but Jeff Hill, D.M.D., finds that his students at the dental school are often more nervous when considering his work than are the patients themselves. As head of the dental clinic at UAB’s 1917 Clinic, Hill provides a full range of dental services for AIDS and HIV-positive patients.

Professional Precautions
“The first thing students ask is, ‘Aren’t you afraid of getting AIDS?’ When I assure them that it’s entirely safe, the second question is, ‘How can you be sure?’” says Hill. “So I tell them that I’m sure because those of us practicing in the 1917 Clinic follow the same universal precautions that all health professionals should follow.”

Those precautions start with barrier protection to keep any body fluids or dental debris from coming in contact with the dentist. Hill dons a gown, gloves, a mask, and protective eyewear that covers the entire optic area. What’s more, many of these items are disposable and are always changed between patients. Even the chair covering is changed, says Hill. “After all, we also want to make sure the patient can count on protection from infection. Taking these precautions is just as much for the patients’ benefit as it is ours.”

Dental Disclosure
“In the real world, patients may be reluctant to reveal their HIV-positive status,” he says. “They may not want it made part of their medical records for insurance reasons. Or they may not even know they’re HIV positive.”

In fact, the very reason the 1917 dental clinic was established was to make sure such patients would be able to access dental services, says Hill. “Some patients encountered difficulties when they were seeking dental care—dentists sometimes felt at risk and were unwilling to treat patients who were HIV positive,” he says. “But the health professionals at the 1917 Clinic knew the risk of infection could be rendered virtually nonexistent by following the simple policy of adhering to the universal precautions.”

In addition to barrier protection, another crucial precaution is instrument sterilization. Instruments in the clinic are run through an ultrasonic cleaner and then autoclaved, according to Hill. And the autoclave is checked regularly: “The 1917 Clinic runs a spore strip through the autoclave on a regular basis and sends it out for independent testing,” he says. “A procedure such as this should be routine for every dental office.

“We may be more careful about following all of the procedures exactly the way they should be carried out,” says Hill, “but every dentist should make a habit of following the universal precautions.”

Clinical Compassion
Hill preaches what he practices. In addition to providing direct patient care, he helps his students hone the skills and safety precautions they will need to care for their patients in the future. He hopes to show that compassionate and top-quality care can be provided for each patient, regardless of disease status, within the context of universal precautions.
Yihong Li

The Cutting Edge of Cariology

YIHONG LI was living half a world away when she first came into contact with UAB. She had earned her D.D.S. from the prestigious Beijing Medical University’s School of Stomatology in 1983, and she was interested in getting additional training in the area of public health.

“I had heard of a program being offered at an international training center in Thailand that was sponsored by UAB, UNICEF, and the World Health Organization,” she says, “and so I enrolled. All the faculty were from the UAB School of Public Health, but it was made up of students from all around the world, so it was really like a big boardinghouse. I studied there for a single, very intensive year, and then I earned my master of public health degree in 1988.”

As an “offspring” of the UAB program, as she says, it’s little wonder that Li found herself relocating to the United States, located near the basic training area. “When recruits would arrive, we saw many of them in the dental clinic,” he recalls. “Some of them looked like miserable, rejected hunks of humanity. But three months later you saw how basic training had changed them, allowing men who had never done anything to finally complete and accomplish something.”

Mueninghoff sees his work in the graduate program in a similar light. “You take a student who knows very little about something, and you get to see that person blossom before your very eyes,” he says. “Their success is my goal.”

Although many praise Mueninghoff’s passion for teaching—he recently received a President’s Award for Excellence in Teaching at UAB, in fact—he is quick to turn the spotlight back on his colleagues in the profession. He recalls the UAB dental faculty who made a favorable impression on him during his residency at Fort Benning, Georgia.
"At the time, a member of the dental school faculty would come over and spend Thursday and Friday with us each week. These were individuals such as Jack Sharry, Bill Powell, Emanuel Cheraskin, Marshall Ringsdorf, Ted Fischer, and Arthur Wuehrmann." Mueninghoff adds that Charles McCallum, D.M.D., M.D., then dean of the School of Dentistry, had a great impact on his decision to join the faculty. "Anyone would want to be a part of an organization that Dr. McCallum was running," he says. Arthur Clifford, D.M.D., and Gray Carter, D.M.D., former military and dental colleagues as well as UAB faculty, also encouraged his move to Birmingham.

Mueninghoff continues to enjoy his work. "Birmingham and UAB are certainly dynamic places to be," he says. "The entire enterprise seems to be growing almost daily."

By Rebecca McCracken

Milton Essig

Reconstructive Researcher

MILTON E. ESSIG, D.M.D., personifies the trifold mission of the School of Dentistry: teaching, research, and patient care. As director of preclinical programs, he teaches preclinical and clinical prosthodontics.

"The true challenge lies in taking something complex, simplifying it, and presenting it in an organized manner," says Essig, who was recently awarded an Excellence in Teaching Award at UAB. "When you see your students learn and succeed, that is genuinely rewarding."

By Russ Willcutt

ers to compile the first-ever statistics on mother-child transmission of Streptococci mutans bacteria, including S. sanguis, S. sobrinus, and Lactobacillus and Actinomycetes. Li gathers similar information in Birmingham to share with her fellow researchers during her annual visits to China.

"I want to do as much as I can to further our understanding of bacteria and their connections to dental caries in children, especially those who are underprivileged and living in poverty," she says. "That's one of the things that's great about UAB—having so many opportunities to build collaborative relationships with other universities around the world."

Li also enjoys the opportunities for interdisciplinary collaborations on the UAB campus. In addition to her responsibilities in the dental school, she is a scholar in the John J. Sparkman Center for International Public Health Education, quartered in the School of Public Health. The center involves faculty from many disciplines, including medicine, sociology, and the natural sciences.

Although Li is a visiting scientist at a number of universities in China and travels there at least once a year, she makes her home in Birmingham with her husband, Jie Xu, Ph.D., and their two children, Frank and Emily Xu. Li's husband is a UAB graduate who is also a scientist and laboratory director at Bioelastics Research, LTD, which is located in UAB's Office for the Advancement of Developing Industries (OADI).

"I'm very happy with what I do," says Li of her work. "I am pleased that I can promote good oral health for children both here in the United States and in my home country, as well."

By Jerri Beck

A 1970 dental-school graduate who has since spent 26 years as a member of the faculty, Essig has made substantial research contributions, as well, specifically in the area of CAD/CAM (computerized) ceramic reconstruction. His team developed some of the basic reconstructive techniques in this area, and, subsequently, he has lectured nationally and internationally on bonded ceramic materials and related techniques.

Essig’s affiliations are quite broad. “I have been fortunate to be involved with the medical side of the Alabama Army National Guard,” he says. That group has provided care in Panama, Bolivia, and some poor Alabama communities. Essig received the Meritorious Service Medal for Medical Support Operations in Bolivia from the Guard, as well as the Alabama Commendation Medal from Governor James Folsom for his work in Alabama. Essig currently holds the position of deputy commander in the Guard’s fifth medical detachment.

Essig still finds time to make significant contributions to the dental profession—both as a scientist and as a teacher. “Even after all these years, I’ve never lost my interest in watching my students progress toward becoming true professionals,” he says.

“In fact, contributing to their professional development is probably the thing that matters most to me.”

By Jerri Beck
Student Spotlight

Ruth Aponte-Parra

Latin-American Legacy

RUTH APONTE-PARRA, D.D.S., once thought she’d like to become an architect. Instead of designing buildings, however, she ended up helping design and rebuild human faces.

“Today I’m earning double residencies here at the School of Dentistry at UAB,” says Aponte, who drops the Latin custom of using “Parra,” her mother’s maiden name, while in the United States. “I completed a three-year residency in prosthodontics last summer, and now I’m doing my residency in maxillofacial prosthodontics.”

The personable Venezuelan isn’t in Birmingham by chance. Her parents, Ruth and Alejandro Aponte, were residents in UAB’s School of Dentistry during the mid-1970s. “Birmingham was part of my childhood, but that’s not why I selected UAB,” Aponte says. “I came mainly because I knew it was a good school for the training I wanted.”

Aponte, who hails from Mérida, a city in the mountainous western section of Venezuela, attended undergraduate and dental school at the University of the Andes. “My parents were among my dental-school professors,” she says, adding that her father’s specialty is prosthodontics, while her mother practices periodontics. “Now they’re retired from teaching, but they still practice dentistry.”

Although she’s far from Mérida, Aponte has little time to be homesick. She has a wide support group of friends in Birmingham, and her parents come to visit two or three times a year. Like most residents, she spends most of her waking hours working.

“During the day I work with patients who need extensive intraoral and extraoral comprehensive treatment,” she says. “A typical patient may be someone who has had cancer surgery, has congenital defects, or has experienced trauma due to an automobile accident.”

Working under the direction of Thanos Kokkas, D.D.S., an assistant professor of dentistry, Aponte is frequently part of a medical team that includes ear-nose-and-throat specialists, plastic surgeons, maxillofacial surgeons, and sometimes pediatricians.

After five o’clock, she usually spends several hours working in the lab on prosthetic devices for her patients.

With another year left to complete her maxillofacial residency, Aponte says she feels as if she’s found a home at UAB. “I would definitely like to stay here so that I might give back some of what I’ve gained at the dental school.”

By Sandra Bearden

Nancy Hein

A Winding Path to a Rewarding Career

UNLIKE MOST STUDENTS who enroll in dental school right after earning their undergraduate degrees, Nancy Hein’s path to the School of Dentistry has been long and winding. After working on the edges of the dental profession for nearly two decades, she is now preparing for the next phase of her career—as a practicing dentist. “It’s like a fairy tale,” she says.

“I started out as a dental assistant, and then I received my hygiene license in 1990,” continues Hein. “Then I worked as the office manager of a dental clinic for the next ten years. At some point I

Eric Green

Professional Priorities

A NATIVE OF Athens, Alabama, Eric Green plans to perform his residency in periodontics at UAB after graduating from the School of Dentistry.

“I always wanted to be a health-care professional,” he says. "After seeing and visiting with several doctors and dentists, I decided to take a close look at dentistry. The dentists seemed to have more time for their families and their personal lives, so I decided to go with dentistry."

Green attended John C. Calhoun Community College in Decatur and then earned a bachelor’s degree in zoology at Auburn University. In 1996, he enrolled in the School of Dentistry on a minority scholarship.
Green stresses the importance of his parent’s support while he pursued his dental degree. “I’m thankful for my parents and their support through the tough times when I’ve had to stay up all night studying,” he says. “The past four years have been very productive ones for me, and I’ve done a lot of growing up.”

A member of the Student National Dental Association (SNDA), Green has been involved in several SNDA community outreach projects, including distributing canned goods during food drives at Thanksgiving and Christmas, leading motivational discussions about the dental profession for students at area schools, and teaching oral hygiene in high-school settings.

Green says that Patrick Louis, D.D.S., associate professor of oral and maxillofacial surgery, is among the faculty members and administrators who made a lasting impact on him. He is also thankful for the insight he has received from both Steven J. Filler, D.D.S., assistant dean of student, alumni, and external affairs, and David S. Greer, D.D.M., former assistant dean of student affairs at the School of Dentistry.

“These three people have really gone out of their way to share their knowledge and expertise,” says Green. “It was fascinating to learn about the delicate art of surgery in Dr. Louis’s classes. Not only does he present the material in an informative way, but he’s also professional, articulate, and has a good sense of humor. That can make all the difference when a professor is presenting complicated and challenging information.”

After graduation, Green plans to begin his residency in periodontics at UAB before eventually opening his own practice in either Tampa, Florida, or back in his own hometown of Athens. “I’d like to return to Athens because my family is there,” he says. “I’d like to start a family of my own at some point, maybe have a couple of children, and the thought of raising them in a small town is very appealing to me. I like the sense of community and family that you get in smaller towns—a place where I could make my own contribution, as well.”

By Daniel Willson
Although she graduated only recently, Anissa B. French, D.M.D., has been preparing for a successful career in dentistry for quite some time. As a student in the School of Dentistry at UAB, she served as national president of the Student National Dental Association (SNDA), which bestowed the prestigious Craig Alford Meritorious Award upon her in 1999.

“The SNDA is the largest minority dental student association in the United States, with more than 700 members in dental schools located across the country,” she says. “I was proud to serve as national president of such a wonderful organization and to be a leader in the areas of community outreach and educational and recruitment programs.”

The SNDA was obviously proud of her as well, since the Alford Award is given each year to only one dental student— the one who has contributed the most to the association during that year.

Immediately after graduating, French signed on with the Alabama Center for Aesthetic Dentistry, where she practiced with Barry Gravitt, D.M.D., a 1989 graduate of the dental school. “We did general dentistry with an emphasis on cosmetic dentistry,” he says. “I enjoyed doing cosmetic work because of the way you can change people’s lives and the way they see themselves.”

“Changing Lives Through Community Outreach

Anissa B. French

William Beall

Compassion in the Countryside

William Beall, D.M.D., is a rarity. Not only has he practiced in the same location for more than 38 years—missing only two days during the first 20 of those years, in fact—but he also serves a rural area, which isn’t exactly known for drawing hordes of fresh dental-school graduates. Beall says he knows why that is.

“I think there’s a shortage of rural dentists and physicians because students are taught about the bright lights instead of the sunshine,” he says, “but life is good out here in the country. For instance, most urban practices have high staff turnover. But I have four young staff members who have worked with me for a total of more than 120 years.”

A 1959 graduate of the School of Dentistry at UAB, Beall was persuaded to return to his hometown of Luverne, Alabama, by two local physicians who had a dream. “They wanted to open a hospital, but they knew that wouldn’t be possible unless they could recruit a surgeon,” he says. “They wanted Dr. J.D. Williams, who was then chief resident of surgery at Lloyd Nolan Hospital. I had performed general anesthesia during my two years of service in the U.S. Navy, and Dr. Williams said he would come if I would sharpen my skills and assist him, which involved a thousand-hour minimum residency. We were eventually able to get Hill-Burton Hospital up and running as a result of our efforts.”

He attributes a great deal of his success to simple hard work, and says that dedication to preparation is crucial for anyone entering the dental field. “It’s like Abraham Lincoln once said,” says Beall. “If I had eight hours to cut down a tree, I’d want to spend six of those sharpening my ax. That’s the only way you can give achieve excellence as a physician.”

Beall still exhibits the enthusiasm of a young dentist fresh out of school. “If I could retire today, I think I’d go right back to school and start over again,” he says. “I like being in an atmosphere where I’m challenged to learn.”

By Daniel Willson
Robert Holt

The Dental Diplomat

EVEN THOUGH he practices in his hometown of West Palm Beach, Florida—living in the same house in which he grew up, in fact—Bob Holt, D.M.D., Ph.D., has worldwide networks within the profession of dentistry.

“It’s a lot more than a job, it’s a way of life,” says Holt, who travels throughout Europe several times a year to share his knowledge of surgical techniques with his colleagues in countries such as Germany, Austria, Switzerland, and Italy. “I feel that I’m a member of this wonderful fraternity of conscientious practitioners, and when I take those trips, I often find that I learn as much as I teach.”

Holt, a 1971 graduate of the School of Dentistry, says he developed this philosophy at UAB: “Dr. McCallum was the dean of the dental school then, and he set the tone,” he recalls. “There was this incredible group of people there, and they really motivated us to do our best.

“They taught us that, with education and licensure, there came privilege,” he says. “In addition, there was also the responsibility to your community to perform with a high level of excellence and ethics.”

A graduate of Washington & Lee University in Lexington, Virginia, Holt applied to various dental schools in the Southeast in 1967 and was accepted by a few. Then fate intervened. “I was dating a girl from Alabama, and her father was a dentist in Montgomery,” he says, referring to Ansley G. Brown, D.D.S. “He steered me in the direction of UAB and everything just kind of fell into place. He also became my father-in-law.”

With each challenge he met and faced, Holt found himself evolving both personally and professionally. In 1968 he was offered a clinical research training program scholarship, funded by the National Institute of Dental Research and one of only three such positions available at that time. “That’s where I met Jiri Mestecky, who had just arrived at UAB from Czechoslovakia, and Ray Williams, who’s now chair of periodontics at the University of North Carolina,” he says, recalling work that led to a Ph.D. degree in microbiology in 1974. “It was a growth experience like I had never imagined. I just had no idea what I was getting into, but it was all so positive.”

Faced with certain service during the Vietnam era, Holt had enlisted with the Navy as part of the early commissioning program, agreeing to exchange service for deferment for schooling. After graduating from UAB in 1974—and receiving his certification in periodontics—he then spent two years as division periodontist with the Marines at Camp Lejeune, North Carolina. Once discharged, he returned to West Palm Beach to care for his ailing father. During that time, he met Marvin Rosenberg, D.D.S., who had his own practice and invited Holt to join him professionally. “I thought I’d do it for a few years while I was caring for my dad—but that was 24 years ago and I’m still with the same guy.” There are currently six periodontists in the practice, with three locations in Florida.

Holt is accompanied during his frequent travels by his wife, Cathy, an 18-year employee of his practice and now-retired dental hygienist. He has two daughters: Amy, a CPA who lives in Memphis, and Katherine, a real-estate agent who resides in Birmingham.

Considering the many gifts he has received from UAB, Holt says it’s important that he give something back. That’s why he recently established the Ansley G. Brown Lectureship, which will bring leading dental professionals from around the country to lecture at the School of Dentistry.

Holt says the most important thing he learned in his dental school training was compassion. “I recall one professor who used to say, ‘Remember that every set of teeth that walks into your office has a real live human being attached, and if you focus your treatment on the needs of that human being, you will be successful,’” he says. “And you know something? That’s extraordinarily perceptive advice.”

By Rhonda Sessions Gregg
In each issue of Contact, we will include a “question and answer” interview with an alumnus or aluma of the School of Dentistry at UAB. In this issue, we meet David Sarver, D.M.D., M.S., a pioneer in the technique of video imaging, who currently practices in Birmingham.

Sarver received his D.M.D. degree from the University of Alabama School of Dentistry in 1977, going on to earn his certificate and M.S. degree in orthodontics from the University of North Carolina in 1979.

For more information on Sarver and his practice—including a list of his scheduled lectures—please visit his Web site at [www.sarverortho.com].

CONTACT—Your recent book, Esthetic Orthodontics and Orthognathic Surgery, seems very accessible—even for non-dentists. How did you go about that?

SARVER—Well, I dictated the book instead of writing it, so it’s very conversational. When the reviewers from Mosby received my manuscript, they kept trying to dress it up, and I finally called my publisher and said, “That isn’t the way I want it to read.” So she ended up deciding, “The doctor wants it this way, so that’s the way it’ll be.”

CONTACT—So from the beginning you wanted it to be a more personal take on the subject?

SARVER—More readable. I didn’t want people to look at the pictures and put it up on the shelf and just say they had it, I wanted them to read it. There are a lot of case illustrations weaved throughout the book. We also included little mini-summaries at the end of each section, like a table of what’s just been discussed. I thought that was an interesting approach.

CONTACT—You’re an acknowledged expert on the use of video imaging in orthognathic surgery. Could you talk about the history of the technique and the role you’ve played in its development.

SARVER—In the mid-eighties, as jaw surgery became more accepted, I was a member of the orthodontic faculty at UAB. We found it difficult to explain to people how they would appear after the procedure just by waving our hands around and drawing pictures. So I tried to communicate by taking a patient’s picture with a Polaroid camera against a black background and then cutting the photos up with scissors to try to simulate what they would look like.

CONTACT—Sounds time consuming.

SARVER—It was, but it got me started thinking about new ways to achieve the same thing. My wife was a systems engineer with IBM, so she had kept me pretty up to date on the latest technology. In 1984, I bought a computer and a graphics card, put it all together, and then started doing very crude kinds of imaging. Well, my technique progressed over the years, and I published my first article on the subject in 1988. Maybe there were other people working on the same thing, but it was the first publication on the subject.

CONTACT—In your book you also mention how important it is to be aware of the psychological aspects of such a procedure.

SARVER—Yes, that’s a very important consideration. One thing imaging helps us avoid is something called “post-purchase dissonance”—which is the same thing as buying a shirt without trying it on and then realizing it really doesn’t look good on you once you get it home. Video imaging lets patients ‘try on’ treatment plans before they commit, which can be enormously comforting.

CONTACT—Has that approach had a big impact on your patients’ comfort level?

SARVER—Absolutely. We’ve pulled together figures showing patient satisfaction six months after the operation, and 90 percent of our patients reported that they were happy with the aesthetic outcome. That’s compared to a University of Washington in Seattle study of people who were counseled without graphic imaging, using models of their teeth and things like that, and only 45 percent were satisfied. From a psychological standpoint, people are just going to be happier with the outcome if they’re involved in the planning process.

CONTACT—What about the ethical implications?

SARVER—The integrity of the doctor is absolutely paramount to the whole process because you could use this technology dishonestly to try to sell patients on treatments. It’s an incredibly powerful tool, and that’s why I devote a portion of my book to the ethics of informed consent.

CONTACT—So where are we headed with all of this?
SARVER—Everything with computers is accelerating at such a rapid pace that it’s really having an effect on every aspect of dentistry. As for the penetration of technology into orthodontics, probably 40 to 50 percent of orthodontic practices have this sort of technology in their offices, whereas five years ago it was below 10 percent. What will happen in the next five years is that every resident who finishes a training program will use this technology. In the near future, we will also see 3-D imaging that will be provided through Web-based service companies. For instance, instead of me having to buy some huge, powerful computer, I’ll be using what’s called “application service provider” technology. This will allow us to use a workstation here in the office to send X-rays and pictures to a company that will integrate the images and produce the models. Then, when we’re ready to do the treatment plan, we’ll log on and be able to look at everything in 3-D, rotate it around, do whatever we want to do.

CONTACT—In what other ways will this technology improve your relationship with patients?

SARVER—We’ve just started developing a system that will allow patients to visit our Web site and, using a PIN number, they’ll be able to check on their accounts, their next appointments, when they were last in, anything they want to know. This technology will really improve the interaction between dentists and their patients.

CONTACT—You’ve lectured on this topic in the past, but could you talk about why you decided to become an orthodontist?

SARVER—Believe it or not, I decided in the 10th grade that I wanted to be an orthodontist. The one that I had as a kid made a big impact on me, and all I knew is that I wanted to do what he obviously enjoyed doing so much. Really, though, it’s as simple as this: An orthodontist is someone who takes a 10-year-old kid who needs help with their teeth, and when he’s finished, the child is a pretty little girl or a good-looking guy. That’s the bottom line. I mean, obviously there are matters of economics and respect and all of those things, but what brings you to work every morning is the chance to take off those braces and watch that kid head out the door.