

**ALUMNI BULLETIN  
VOL. 9, NO. 1, 1995**

**ANNUAL REPORT**

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**THE PLACE**

**INDIANA UNIVERSITY  
SCHOOL OF DENTISTRY**

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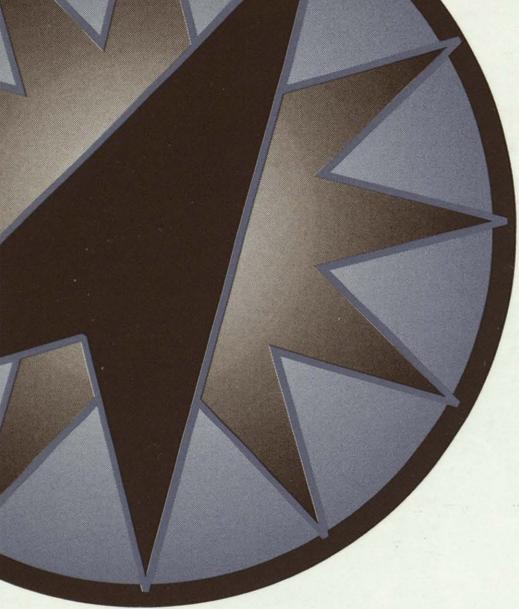
SUSAN L. ZUNT, Special Representative, Department of Stomatology



## THE PEOPLE INDIANA UNIVERSITY SCHOOL OF DENTISTRY

*IUPUI's Finest. Dental school faculty, students, and staff gathered for their third annual group photo on September 8, 1994, in the yard east of the building.*

\*Dr. Willis's appointment was announced as this publication went to press. A full report will appear in the next issue of the Alumni Bulletin.



**T**he 1993-94 academic year was one of enormous growth for all of us at the School of Dentistry. It was a year devoted to moving not only swiftly ahead but also courageously *beyond* the barriers commonly associated with periods of great transition. We are now pushing forward together to create a comprehensive education program that will hold faculty, staff, and students to the highest performance standards possible.

In the past year, talented new faculty members were appointed, major renovations to the facility were undertaken, and innovative programs were introduced.

Dental education at IU was bolstered by a reorganized, practice-oriented clinic program, and by a new emphasis on the basic science and oral medicine components of the undergraduate curriculum. Most of the second floor of the dental building underwent extensive remodeling to make way for state-of-the-art teaching and research activities.

Dental faculties throughout the nation, including the teaching staff at IUSD, have been busy writing competency statements as mandated by the American Dental Association's Commission on Dental Accreditation. The objective of these important documents is to describe the *precise* expectations of each school's educa-

tion and training programs. Specific competencies, or educational outcomes, must be manifest in the skills and abilities of dental graduates, and, equally important, must be reliably assessable by the schools through well-structured assessment programs.

Over the last six months, IU's faculty composed a competency statement and widely circulated the draft to selected practitioners in Indiana, to other schools in the IU system, and to several dental schools in the country. We extend our appreciation to everyone who thoroughly critiqued the draft and offered insightful comments and suggestions.

The revised competency statement was adopted by the IUSD Faculty Council on October 10, 1994. It will be used as a guide for our new assessment program and as an instrument to discover trends in dentistry that will lead to curricular enhancement. The competency statement will be published at regular intervals and updated by the faculty whenever revisions are indicated.

One year ago, the faculty leadership outlined an ambitious four-year strategic plan for the IU School of Dentistry. With the help of all faculty and staff, the plan was implemented; since then, an impressive number of goals set forth in the first 12 initiatives have been realized. The following

pages of this annual report focus upon these achievements, which are essential as we steer the school toward a period of reduced legislative support.

The school is already making outstanding progress tackling a new list of strategic initiatives, revised for the 1994-95 school year. We will continue to face challenges, and these challenges are certain to be greater each year. But we are prepared to accept them. The strategic plan will be revised annually to reflect changes in dentistry and dental education, and also to keep the school in line with changes affecting the entire university.

This 1993-94 annual report offers you a summary of our recent activities, and shows you the direction the school is heading. I hope to meet with all interested alumni during the year ahead to discuss our progress and to build upon your support of the school

Innovation, decisiveness, and commitment will be indispensable to the enrichment process at Indiana University School of Dentistry. We welcome your input along the way.

*H. William Gilmore*  
*Dean of Dentistry*



*IUSD Planning Committee*



One year ago, the faculty leadership outlined an ambitious four-year strategic plan for the IU School of Dentistry. With the help of all faculty and staff, the plan was implemented; since then, an impressive number of goals set forth in the first 12 initiatives have been accomplished.



# THE STRATEGY

**T**he Planning Committee devoted the summer of 1993 to an intensive study of the Indiana University School of Dentistry, evaluating ideas related to renewal and revitalization that had been formulated and discussed over a period of years.

The group sought valued advice from the school's employees and students as well as expert guidance from Dr. Daniel W. DeHayes, Jr., director of the Center for Entrepreneurship and Innovation at the IU School of Business.

Emerging from the four months dedicated to this review was a four-year plan of strategy.

The original document, created in September 1993, identifies many great strengths of IUSD's teaching and research programs, and acknowledges that Indiana's graduates are among the best prepared dental professionals in the nation.

The document also underscores the school's commitment to initiate whatever changes are required in order to maintain the caliber of excellence IUSD is well-known for around the world. Much of the Strategic Plan is based upon fiscal information gathered in the early '90s by the administration and a team of developers from the Bloomington and IUPUI campuses. From this data the dental school's economic model, described in last year's annual report, took form.

Indiana University's Responsibility Center Management initiative, a university-wide system introduced in 1989, gives individual schools more control over their financial affairs. The Planning Committee, working in concert with this system, launched a

plan of action that places increasing importance upon dentistry's own role in the management of its resources. Since last year, all departments within the dental school have been applying the principles of the economic model—scrutinizing each discrete activity they are responsible for—to determine how outcomes, while continuing to be of high quality, can be arrived at in the most cost-effective manner possible.

An institution of the dental school's size and scope presents tremendous challenges to everyone involved in the management of its resources. In shouldering their portion of this task, the faculty and staff have shown themselves to be inventive and enterprising participants.

Other steps in the Strategic Plan address the equally important issues of student recruitment and retention, faculty development, and research. The plan also delineates steps the dental school has taken to bring its education program in line with a teaching paradigm that focuses upon dental health as an integral part of a patient's total wellness program.

The 12 initiatives of the four-year Strategic Plan, and accomplishments achieved in the first year, are summarized in this report.

## INITIATIVES

- #1 Establish a process of ongoing review of the curriculum
- #2 Improve student retention and diversity in the undergraduate dental education program
- #3 Increase the size of the undergraduate dental education program
- #4 Review each graduate program to determine feasibility, size, direction, and fee structure
- #5 Establish an electronic infrastructure
- #6 Identify new technologies in oral healthcare and devise a plan for the funding and incorporation of these technologies into the school's clinics and instructional programs
- #7 Increase undergraduate clinic productivity
- #8 Create a new faculty development program
- #9 Devise and implement a new budgeting system to give the school's six departments more responsibility for generating and using funds
- #10 Encourage faculty to make professional contributions that enhance the revenue of the school
- #11 Establish a school-wide outcome assessment program for measuring the value of all school outputs
- #12 Expand the sponsored research program



#1

## Establish a process of ongoing review of the curriculum

The dental school has undertaken what conceivably is the most important project in its history—a rebuilding of the predoctoral curriculum to reflect dentistry's integral relationship to general health.

*Treat patients, not mouths.* It's a simple directive, but a daunting challenge when one considers that today's dental patient pool includes rapidly growing numbers of persons who are living longer and/or who are medically compromised. It is increasingly more common for patients in the dental chair to be under concurrent treatment not only for short-term physical ailments, but also for chronic diseases and conditions. In addition to rendering quality dental care to such persons, dentists must be adept in communicating with dental patients' physicians as well as a host of other professionals involved in the provision of comprehensive healthcare.

Integrating dentistry into the total healthcare picture is accomplished by a teaching method often referred to as the medical model, and over the coming years IU's dental school will define, create, and apply its own unique version of that model.

Leading the way on this momentous journey is the newly established **Educational Reform Committee**, chaired by Dr. Don-John Summerlin, an assistant professor of oral pathology in the Department of Stomatology.

In recent months, members of the Educational Reform group visited

several medical and dental programs at other institutions in the U.S. to investigate a variety of innovative educational approaches to the medical model. The group also drafted a thought-provoking white paper proposing a philosophy of educational reform for the school.

"Diseases of dentistry are not separate from diseases of medicine," says Dr. Summerlin. "What we want to do is reemphasize to students that the mouth is not isolated. It exists in a continuum with the rest of the body. Conditions that affect other parts of the body can have a significant impact on the oral structures, just as procedures we perform in the oral cavity can affect a patient's general health."

The white paper was presented to and accepted by the IUSD Faculty Council in the fall of '94. With a green light from the faculty, the group has now begun the arduous task of studying ways to create a new educational infrastructure to support the medical model. Group members expect to spend the remainder of the 1994-95 academic year working with the faculty at large to build a framework for the model.



Don-John Summerlin, chair, Educational Reform Committee



Jonathan Gray, chair, Teaching Assessment Committee



William Hohlt, chair, Curriculum Committee

"Indiana has always been recognized for turning out very good dentists," says Dr. Summerlin. "But as members of the faculty we must ask the question: Are there things that *we* could do better? If we as clinicians don't understand the processes and interactions of drugs that many of our patients take to combat debilitating diseases, then we are providing a disservice to those patients. We must be able to understand what disease

processes do to the body because, in all likelihood, there will be some expression in the oral cavity of either the disease or the medication. And if we can't recognize it, the possibility exists that we will not treat our patients appropriately."

IU's dental curriculum is on the verge of a significant transformation, but the simple tenet underlying the program remains steadfast. "Our goal," says Dr. Summerlin, "is to prepare students to be caring professionals who render high quality services to their patients."

Proposed changes to the curriculum require a vote by the school's Faculty Council after first being reviewed and approved by the predoctoral **Curriculum Committee**. This long-standing committee was completely reorganized last year and placed under the leadership of Dr. William Hohlt, associate professor of orthodontics in the Department of Oral Facial Development. Pared down to six members from an unwieldy group of 14, the committee now includes just one representative from each of the school's departments.

The primary role of the committee is to oversee a curriculum that—in order to do its job well—must remain in a constant state of transition, being trimmed and fattened to mirror changes occurring within the profession itself. Difficulties arise when enthusiasm for adding new components to the curriculum is matched by a reluctance to do away with old material. A relevant, illuminating dental curriculum threatens by its

very nature to jump the boundaries of a four-year time limit.

"Simply stated, the new policy says that the faculty can add course material to the curriculum only if something else representing an equal number of hours is removed," says Dr. Hohlt. Composition of the committee assures each department a strong voice in deciding what goes into, and comes out of, the curriculum. Making room for aspects of the medical model, which might eventually call for such additions as a medical-overview course and hospital rotations, presents the committee with a bulging portfolio of new curriculum problems to solve.

With the need to activate a holistic approach to healthcare education on one hand, and the desire to retain the outstanding qualities of IU's clinical education program on the other, the Curriculum Committee is braced for its greatest venture. "It will be up to us to help the faculty strike the balance," says Dr. Hohlt.

Another group of faculty members serving as architects of the predoctoral curriculum is the new Clinical Competency Committee, recently renamed the **Teaching Assessment Committee**. It is chaired by Dr. Jonathan Gray, clinical assistant professor of periodontics in the Department of Periodontics and Allied Dental Programs.

When Dr. Gray launched a computer search of the literature to learn more about competency-based education, he located 455 articles—but almost none of them pertained to dental education. "I was surprised to find that competency-based learning has been going on in many other professions since the mid-'70s," he says. "Dentistry is a latecomer."

Dental schools around the country are now embracing this approach in response to recommendations from the ADA's Commission on Dental Accreditation. In the competency-based system, dental educators must decide which skills are essential

for the *newly graduated* dentist to possess—skills fundamental to the practice of general dentistry. Once the objectives are pinpointed and clearly defined, the curriculum must be mapped out to lead vigorously toward these specific outcomes. Most important of all, the school must then be able to reliably and routinely measure the success of its curriculum by means of an assessment program that evaluates a student's ability to achieve expected outcomes. It is a system intent on fostering between teacher and student a mutual understanding of what the educational goals are, and on thwarting arbitrary decision-making wherever it occurs in the educational process.

Indiana University was swift to set in motion the rudimentary stages of a competency-based learning program for predoctoral students. The group identified three domains that serve as dentistry's foundation—Professionalism, Patient Care, and Practice Administration—and worked with the faculty at large to compile a concisely worded, step-by-step list of skills essential to achieving competency in each of the three areas. The result of this painstaking effort is a nine-page document that was accepted as the school's official Competency Statement after a vote by the Faculty Council in the fall.

IU's statement is less categorized than some of the other dental school statements that the Teaching Assessment Committee examined while preparing for this project. "Our goal was to eliminate departmentalization as much as possible, and to concentrate instead on developing a comprehensive care model for the general practitioner," says Dr. Gray.

Creating a Competency Statement that is acceptable to a diverse faculty was an extraordinary accomplishment for the committee and for the school. But everyone knows that the toughest chores lie ahead: 1) selecting the educational tools and methods that will be most effective in helping the school accomplish its

goals; and 2) writing reliable assessment strategies for each of the 97 skills, or educational outcomes, listed in the document.

It is at this point that the work of the three independent committees will begin to merge. "I see areas of overlap in determining how we are going to teach our students," says Dr. Gray. "Ultimately, the Curriculum Committee will be sorting the recommendations of the Educational Reform and Teaching Assessment groups, and deciding how we as a school are going to fit the puzzle together."

### Educational Reform Committee

Don-John Summerlin, chair  
Gay Derderian  
Steven Dixon  
Rose Marie Jones  
Marilyn Lantz  
Dale Miles  
Chris Miller  
James Weddell  
Gail Williamson  
Mark Wohlford  
Jayme Adelsperger (student representative)  
Lawrence Garetto (ex officio)

### Teaching Assessment Committee

Jonathan Gray, chair  
Carole Busch  
Edward DeSchepper  
H. William Gilmore  
Richard Gregory  
Ronald Hathaway  
Hala Henderson  
Mark Saxen  
George Willis  
Mark Wohlford

### Curriculum Committee (Predoctoral)

William Hohlt, chair  
Jonathan Gray  
Rose Marie Jones  
Chris Miller  
Margot Van Dis  
Mark Wohlford  
Jeanine Green (student representative)



#2

## Improve student retention and diversity in the undergraduate dental education program

Installing early warning signals that identify students having academic difficulties is the key to improving student retention, says Dr. Hala Henderson, associate dean for student affairs.

Until last year, most problems typically went unnoticed until teachers submitted their mid-term reports to the Student Office—and by then it was often too late in the semester to pull a student out of his or her academic quagmire.

A remediation policy implemented in 1993 was designed to spot poor performances as soon as they occur and to provide students with opportunities to get back on track. At the very first sign of trouble, course directors now describe the problem to the Student Office. After the Student Office notifies the student of the academic deficiency, the student is required to discuss the problem with the course director and, with assistance from the director, write a plan to work on the problem. Instructor and student both sign the form after a plan of remediation is agreed upon. Records are kept of students who do not follow up with their course directors.

“Faculty members are given a lot of freedom in how they choose to help the students,” says Dr. Henderson.

“Directors can elect to use the kinds of mechanisms they believe are most appropriate for their specific courses.”

Course directors carry a greater share of the counseling load under the new system, but a group of full-time faculty members also has volunteered its services for students who wish to be assigned to a mentor. Part-time faculty members are no longer official participants in the counseling program because of the limited amount of time they have available to students while at the school.

The number of students who depart dental school prematurely varies greatly from one year to the next. It has averaged about 11 percent of each class annually since 1983, but these percentages do not reflect the

However, the loss of even one student because of poor performance is deeply discouraging to the faculty and administration, and so efforts have been intensified to make certain students are well supported in their academic endeavors, and that they have available the best remediation program possible, should they need it. Dr. Henderson is encouraged by the faculty’s and students’ widespread participation in the new remediation program and is confident that it will lead to fewer students dropping out of, or being dropped from, dental school for academic deficiencies.

An eye-catching brochure and student scholarships are among the tools Indiana University has employed in order to increase diversity in



Members of the dental school’s 1994 High School Research Apprentice Program, from left (back row): Broad Ripple High School students Jason Curry, Charles Browning, and Jason Moore; Washington High School student Crystal Majors; and Dr. LaForrest Garner, IUSD associate dean for minority student services. Front, from left: James Albright, science director at Northwest High School; Courtney Peterson, Warren Central High School; Dianna Castaneda, Washington High School; and Tashara Ross and Jeffrey Powell, both students at Broad Ripple.

number of students who do poorly, says Dr. Henderson. “Our attrition figures include students who take an academic leave for reasons unrelated to performance, and they usually wind up graduating a year or so after the class they entered with. And it isn’t uncommon to lose some of our *highest* achievers to another program, such as medical school. For the 1994-95 school year we accepted 100 students with the knowledge that we will lose a few through attrition.”

dentistry’s student population, says Dr. LaForrest Garner, associate dean for minority student services.

IUSD’s current enrollment of 14 minority students is higher than enrollment figures of previous years, but Dr. Garner hopes to attract far more minority youngsters to the profession of dentistry over the next few years.

Distribution of recruitment materials, including the newly de-

signed brochure, will be stepped up so that college and high school counselors around the state can share information about the dental program with potential students. Dr. Garner also will continue to make recruitment visits to college campuses in Indiana and elsewhere.

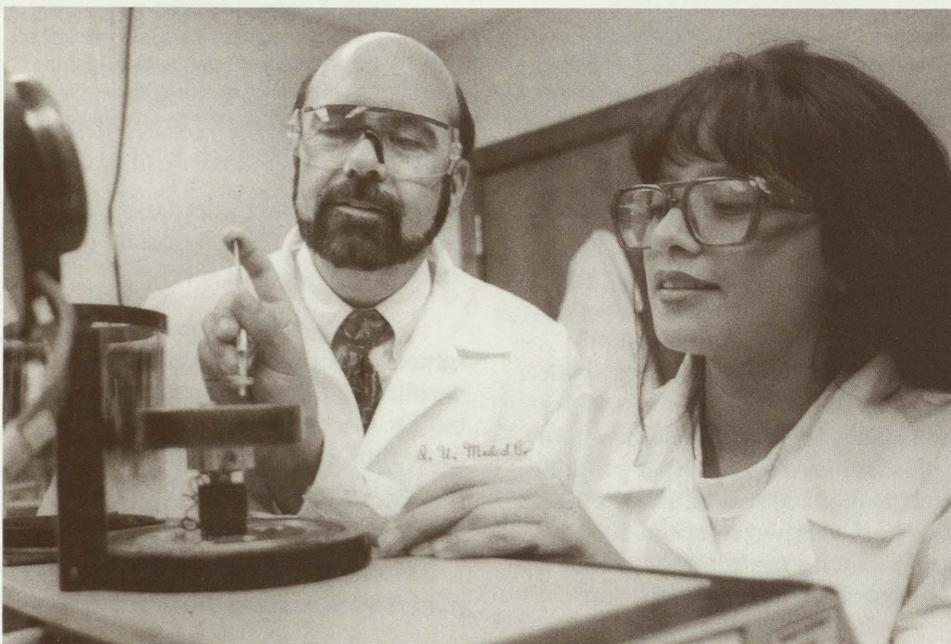
Dr. Garner's recruitment program received a welcome boost during the past fiscal year, when The Health Foundation of Greater Indianapolis provided a grant to be used as scholarships for African-American students. The program is aimed at improving the current ratio of residents to dentists in the African-American community. Indianapolis has 160,000 African-American residents, Dr. Garner says, and just 28 African-American dentists. The state has no African-American dentists practicing south of the state capital.

Currently two \$5,000 scholarships are available for the 1995-96 academic year. Scholarship applicants must be Indiana residents and meet the following criteria: college grade point average of at least 3.0 (on a 4.0 scale), a score of 12 or higher on the Dental Aptitude Test, and demonstrated financial need.

The dental school's annual High School Research Apprentice Program for minority students continues to flourish, bringing some of Indiana's brightest teenagers to the school for eight weeks of study in the summer. This college-preparatory program exposes high school students to the research environment; each student earns a stipend while preparing a research project under the guidance of faculty and staff mentors. At the end of two months the students present results of their work to an audience of their peers and mentors. Eight students in the 1994 group, all from Indianapolis schools, were accompanied by James Albright, science director for Northwest High School.

Dr. Garner also is in the process of building an IUSD scholarship fund to assist first-year minority students. In this program one student annually would receive \$5,000 to cover cost of supplies and equipment. Three thousand dollars have already been donated to the fund by IUSD alumni and others. Persons with an interest in assisting with this effort should contact Dr. Garner at the school (317/274-5625).

*Faculty mentor James McDonald, Jr., and Dianna Castaneda, a student researcher from Washington High School*



#3

### Increase the size of the undergraduate dental education program

High attrition rates, tuition fees that are fast approaching their maximum, and the university's challenge to all IU schools to find new ways to generate additional resources have led the School of Dentistry to increase the size of its dental classes from 85 students to 100.

Of the incoming DDS class for the 1994-95 school year, 71 are residents, 27 are nonresidents, and two students are repeating the first year. All of the additional students taken into this group are nonresidents.

"We are sensitive to the concerns of dentists and to the dental manpower needs in this state," says Associate Dean Hala Henderson. "The decision to increase the class size was arrived at only after very careful deliberation. We have purposely chosen to increase the class with nonresidents because we know that out-of-state students generally do not remain in Indiana after graduation."

For example, in the DDS Class of 1986—which was identical in size to the incoming Class of 1994—90 of the 100 students were residents. A total of 83 graduates reported in their exit interviews that they planned to practice in Indiana, and 86 members of the class sat for Indiana's dental board in June or October of that year. The 1994 *American Dental Directory*,\* published by the American Dental Association, lists 70 graduates of the Class of 1986 with Indiana addresses.

For the 1994 incoming class, the Admissions Committee selected 71 in-

*\*The directory includes the names of all U.S. dentists, regardless of ADA membership status.*



state students, a number similar to preceding years. To ensure that the ratio of residents to nonresidents remained constant during the lengthy admissions process, the names of residents and nonresidents were kept on separate lists of alternates. If out-of-state candidates withdrew their applications after being accepted, the Admissions Committee filled the position with another candidate from the nonresident list.

"We were very careful to maintain a ratio of about 70 percent residents to 30 percent nonresidents," says Dr. Henderson. The Admissions Committee will continue to employ this pattern of student selection until needs in the state change. "There is a good possibility that the need for dentists in Indiana will increase significantly in about a decade, when the high number of dentists in the 55-year-old age range begin to retire."

The school didn't have to conduct any special recruitment program to find extra out-of-state candidates. "With Indiana's outstanding reputation, we've been able to rely upon word of mouth," says Dr. Henderson. "Highly qualified applicants have been plentiful."



#4

#### Review each graduate program to determine feasibility, size, direction, and fee structure

One of the most surprising details to surface while the school was establishing its economic model was the extraordinary cost associated with the awarding of a master's degree. Educating a postgraduate student, as it turns out, is a far more costly venture than that of educating a predoctoral student.

Graduate level seminars, for example, have typically been offered to classes in which just two or three students are enrolled. "When all the resources used to teach this type of class are looked at, including the salary of the person or persons teaching it, the cost is completely out of proportion to the tuition collected," says Lynn Finkel, the school's director of administrative and financial affairs.

Under the guidance of the newly established Graduate Advisory Committee, the school has been evaluating each postdoctoral program with the objectives of redefining program standards, and bringing graduate education in line fiscally with other programs offered by the school.

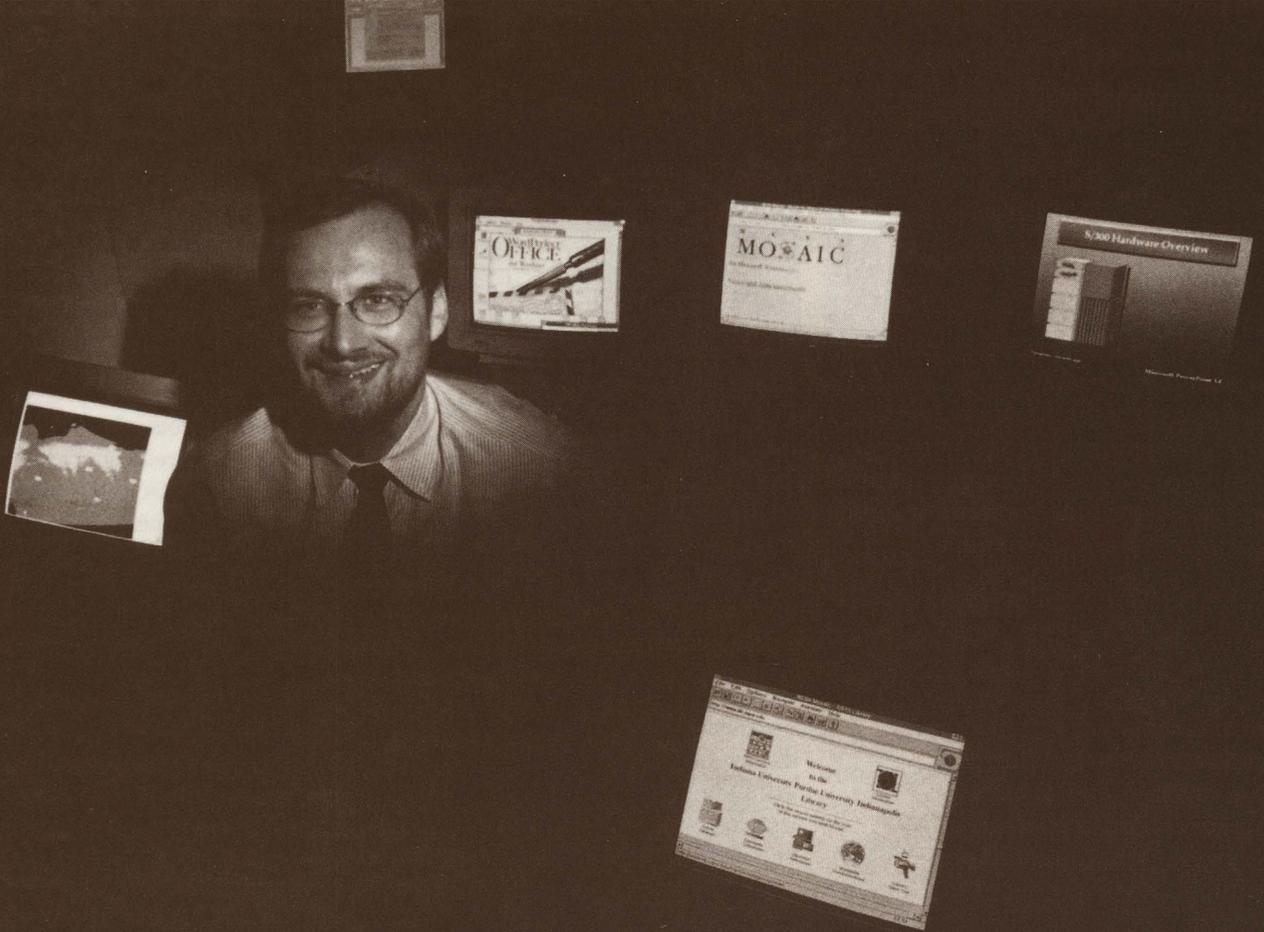
Six core courses have been designed that will be required for all graduate students beginning in the summer of 1995 (these will be in addition to departmentally required courses). The courses are Physiology and Pathology of Bone, Clinical Oral Pathology Conference, Advanced Radiology, Statistics, Scientific Writing, and an oral biology course still

under development. The core courses will cover material previously offered by way of myriad seminars that were usually limited to students in one particular specialty (thus the proliferation of numerous, tiny classes).

The core courses will offer the advantage of bringing students together from all the different fields of dentistry, creating greater opportunities for interaction among students representing many departments, specialties, research interests, and areas of expertise. The consolidation of these courses complements the school's mission of steering clear of teaching methods that foster isolation and interfere with the collaborative spirit of modern-day dentistry. (During the previous fiscal year, the school's 13 departments were reconfigured into six groups.)

Inequities in pre- and postdoctoral fees were eliminated a year ago when graduate tuition was made identical to undergraduate tuition. But more needs to be done. In the coming year Mr. Finkel will provide an analysis of the financial performance of each graduate program, and departments will be asked to suggest strategies for enhancing individual programs.

The decision this past year to close IU's master's degree program in oral pathology came about as a result of a dwindling applicant pool and IU's inability to offer graduate stipends in oral pathology, as some dental schools do.



**Merging Traffic.** The dental school's entrance ramp to the information superhighway is being paved by computer network manager Thomas Boehm, who is surrounded here by computers that will become part of a first-floor computer cluster for students.



#5

Establish an electronic infrastructure; and



#6

Identify new technologies in oral healthcare and devise a plan for the funding and incorporation of these technologies into the school's clinics and instructional programs

Through a worldwide computer network called the Internet, 250 faculty and staff members at the IU School of Dentistry have recently acquired electronic mail (e-mail) addresses; with those addresses, employees can shoot computer messages to persons across the hall, across the campus, across the country, or across the ocean—all without leaving their desks.

That's for starters.

With the stroke of one computer key, the system allows users to simultaneously send information to everyone at the school. It also makes it possible for users to:

- open individual "desk" calendars so that the most convenient day and time to schedule meetings for several people can be determined
- send one attached report to 50 people, or 50 attached reports to one person
- access electronic mail from their home computer or from a computer in another part of the world (and soon users will be able to access their computer's hard drive from off-site locations, which essentially will enable them to "take" their office files anywhere they want without having to pack up anything except a secret access code (and most are toting *that* around in their memory instead of their briefcase)
- tap into all of IU's library collections; the collections of other Indiana universities and colleges; and WorldCat, a catalog containing more than 30 million bibliographic records from libraries around the world

- call up information about the U.S. government, including speeches by President Clinton a day or two after he makes them
- access telephone books from other parts of the world
- thumb through (well, "click on") pages of the *Encyclopedia Britannica*

There are, of course, hundreds of other services available on the Internet. Trying to get acquainted with just a fraction of them can frazzle even the most computer literate. While some folks at the school still prefer the charm of a two-lane blacktop over the wonders of the information superhighway, most are adapting quickly and making good use of the many time- and paper-saving features the system offers.

Take the Research Day Committee, for example. Last year, to compile a 76-page book containing 100 scientific abstracts that was distributed at Research Day, an employee spent several days laboriously retyping all of the researchers' contributions. Another employee spent many hours painstakingly proofreading the new copy.

This year, most of the book is compiling itself through e-mail. Researchers throughout the school and the Oral Health Research Institute send their abstracts through their computers as an attachment to an e-mail message. An employee collects the abstracts electronically and compiles them one by one into a newly created document named "Research Day Book." This one, long document will serve as the final version of the book (and as camera-ready copy for the print shop).

Thanks to the computer network, this major project will be accomplished with much less time and energy devoted to it—a secretary won't be needed to retype material, and the proofreader will face a much less time-consuming chore.

Overseeing all of this new activity is Thomas Boehm, the dental school's computer network manager who was hired in the spring of 1994 to update many of the dental school's old computers, install about 70 new ones, bring everyone on line, launch the school's ongoing computer education program, and maintain the IUSD server, which must be continually updated in order to keep the school abreast of changes in computer technology and programming. Brendan Smith joined the school a few months later to teach employees the variety of word processing and spreadsheet software programs available on the system.

Figuring out ways to take full advantage of the new electronic infrastructure for the benefit of students is the goal of a newly established Integrated Learning Technologies Committee chaired by Sara Hook, IUSD librarian. The group will investigate innovative applications of the on-line computer system and other technological ad-

## CONNECTING WITH IU DENTISTRY THROUGH THE INTERNET

### Administrative Offices

DEAN OF DENTISTRY:	deadent@iusd.iupui.edu
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STUDENT AFFAIRS (records and admissions):	students@iusd.iupui.edu
CLINICAL AFFAIRS:	clinics@iusd.iupui.edu
MINORITY STUDENT SERVICES:	mstuserv@iusd.iupui.edu
RESEARCH:	research@iusd.iupui.edu

### Departments

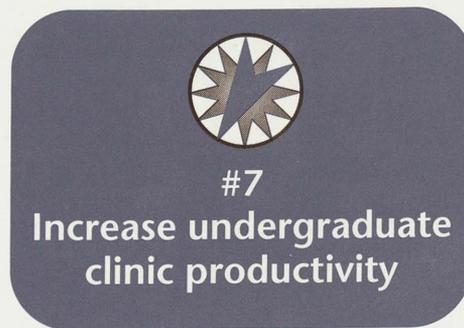
ORAL BIOLOGY (oral microbiology/preventive and community dentistry):	oralbiol@iusd.iupui.edu
ORAL FACIAL DEVELOPMENT (genetics/orthodontics/ pediatric dentistry):	ofdevelp@iusd.iupui.edu
PERIODONTICS AND ALLIED DENTAL PROGRAMS (dental assisting/dental hygiene/periodontics):	periodap@iusd.iupui.edu
RESTORATIVE DENTISTRY (endodontics/dental materials/ operative dentistry/ prosthodontics):	restdent@iusd.iupui.edu
STOMATOLOGY (oral diagnosis/oral medicine/ oral pathology/oral radiology):	stomatol@iusd.iupui.edu
SURGERY AND HOSPITAL DENTISTRY:	surgery@iusd.iupui.edu

### Special Programs/Divisions

ALUMNI BULLETIN:	bulletin@iusd.iupui.edu
CLINICAL RESEARCH FACILITY:	clinres@iusd.iupui.edu
CONTINUING EDUCATION: DEVELOPMENT (fundraising activities):	ce@iusd.iupui.edu
LIBRARY:	library@iusd.iupui.edu
NICOTINE DEPENDENCE PROGRAM:	ndprogrm@iusd.iupui.edu
ORAL AND MAXILLOFACIAL IMAGING RESEARCH FACILITY:	imaging@iusd.iupui.edu
ORAL HEALTH RESEARCH INSTITUTE:	institut@iusd.iupui.edu
ORAL PATHOLOGY GROUP:	opathdx@iusd.iupui.edu
STERILIZATION MONITORING SERVICE:	sms@iusd.iupui.edu

vances as ways to augment the dental school's teaching programs.

Barry Smith, IUSD director of development, is leading the fundraising effort to help the school acquire state-of-the-art technology for use specifically in the undergraduate clinics. A new Electronic Clinic Committee chaired by Dr. Dale Miles, professor of dental diagnostic sciences, is designing a fully computerized dental clinic, which eventually will be located within the Comprehensive Care Clinics on the third floor. It will offer unparalleled learning opportunities for predoctoral students in a clinical environment composed of the most advanced electronic technologies on the market.



Well-managed private practices keep their dental chairs as busy as possible, and so do well-managed dental schools.

Changes implemented in IUSD's clinics during the past fiscal year were designed to increase student productivity and clinic income, and to bring the school a few steps closer to its goal of adopting a medical teaching model.

In January '94 a special senior intern pilot program was established for students who had finished all clinical requirements early. Students qualifying for the program earned 25 percent of patient fees from their point of entry into the program until graduation. In the first year the program attracted 30 members of the Class of '94, and feedback from participants was excellent, says Dr. Donald Tharp, associate dean for clinical affairs.

"It is a program in which everyone wins," he says. "Students can opt to stay busy in the clinics instead of waiting on tables or working other part-time jobs, as many must do. They also reap the benefits of additional experience and remain clinically active right up to the time of state boards. In this program more patients are served by the school, and the school gains extra revenue."

The pilot was so successful that the school decided to offer it again during the 1994-95 fiscal year. It has been named the Senior Clinical Honors Program.

Also during the past year the clinic clusters were renamed Comprehensive Care Clinics, and their directors are called "senior attending

faculty" to reflect terminology used in the medical model.

Patient charts are now assigned to the school's six senior attendings instead of to dental students, a change that has required a major adjustment for these faculty members. (One of the senior attendings, Dr. Steven Dixon, estimates that at any given time he is accountable for about 600 patients.) Students no longer treat their assigned patients in various clinics during the third and fourth years, but remain stationed in one Comprehensive Care Clinic under the guidance of the same senior attending throughout their clinical training (the remaining teachers move from clinic to clinic to accommodate the students and patients).

The importance of the multifaceted role senior attendings will play in the education of IU's students should not be underestimated. They not only teach the students about clinical dentistry but they also will serve for two years as anchors, role models, counselors, and mentors. The new arrangement should help the senior attendings develop a closeness with students that will be unprecedented at the school. Their contributions will be critical to the success of the medical model.

These changes have been made to further refine a patient-treatment system that has, since 1992, attempted to simulate the private-practice setting as closely as possible. The Comprehensive Care Clinics promote formation of a long-term relationship among three persons who will benefit from it the most—the patient, the patient's student, and the student's mentor.

During the past fiscal year clinic income increased by 9.2 percent. A comparison of records for July-August '93 to records for July-August '94 revealed a leap of 28.5 percent in clinic income.

## CLINIC FACTS 1993-94

The current patient population is about 5 percent larger than it was during the 1992-93 fiscal year, with a total of 14,097 patients actively seeking treatment at the IU School of Dentistry.

	Patient Appointments	Clinic Income
Predoctoral students:	59,036	\$1,719,710
Graduate students:	16,637	\$885,206
Dental hygiene students:	7,091	\$113,092
<b>TOTALS:</b>	<b>82,764</b>	<b>\$2,718,008</b>

## Dentistry for the Homeless

In a collaborative community outreach effort between People's Health Center, on the near-eastside of Indianapolis, and the IU dental school, students of dentistry provide treatment to homeless persons on site at the center. The program has been made possible in part with a People's Health Care for the Homeless grant, which provides comprehensive primary healthcare to homeless men, women, and children in Marion County. Last year, 172 homeless patients were treated at the center by students of the DDS Class of 1994. IU's students performed the following procedures:

5	emergency appointments
40	examinations
54	restorations
28	periodontal procedures
55	oral surgery procedures
55	radiographic procedures
8	endodontic procedures
9	dentures constructed
10	denture relines and repairs

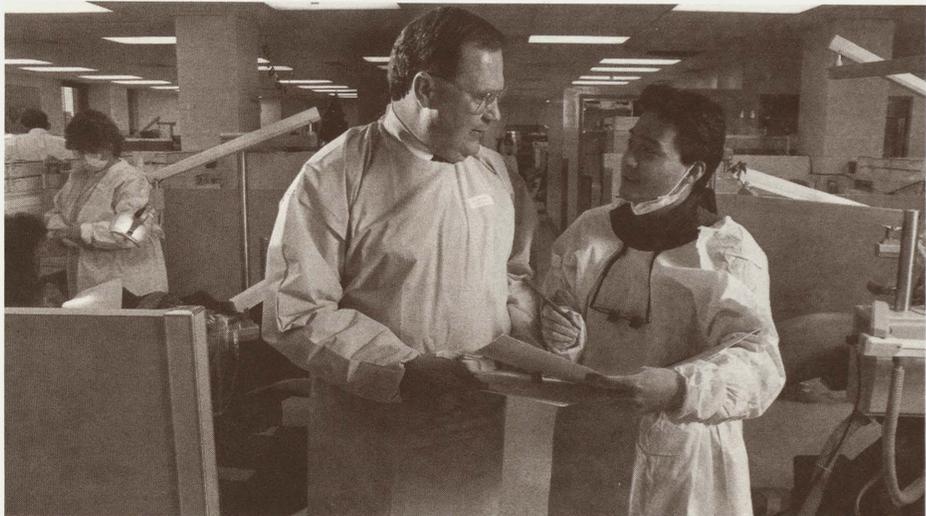
## Dr. Steve Dixon, Senior Attending

"I feel privileged to have been selected as one of the senior attendings.

I came to the school because I was excited about the impact I thought I could have on students in regard to their relationship with patients. Teachers know that students have to learn to be good clinicians. We make sure that they are taught all the proper technical procedures. But sometimes I think we take it for granted that students know how to talk to patients, how to relate to them. These skills must be learned, just like other skills important to the practice of dentistry.

I'm in favor of having the patient charts assigned to the senior attendings. We need to be able to closely monitor the ongoing treatment of each patient, and to be sure that students are appointing their patients in an expedient manner. It's also important for students to observe how the faculty interact with patients.

A dental school colleague recently said to me, 'What you are doing in the Comprehensive Care Clinic is problem-solving, and that's what you did in private practice. All you've done is shift positions.' It's true that my philosophy of dental education is a lot like the philosophy I had in practice: Treat your patient as you would a family member.



Steven Dixon (DDS'73), left, in the clinic with third-year student David Yu. Dr. Dixon practiced general dentistry in Evansville from 1973 until last year. In 1992 he joined the school as a part-time instructor, commuting from Evansville. In 1993 he came on board as a full-time assistant professor in the Department of Restorative Dentistry, and accepted the directorship for one of the school's Comprehensive Care Clinics.

It's rewarding to look forward to coming to work every day. I know it sounds corny, but teaching is fun. Being associated with the school's students and patients is tremendously fulfilling. There are times when the amount of work can be overwhelming, but that's what it's like in private practice, too.

I have a desire to make a difference. I haven't forgotten the instructors who influenced my education, and therefore my career. I hope I can reach at least some of my students in the same way."

## Senior Attending Faculty

**TIMOTHY CARLSON**  
**STEVEN DIXON**  
**CHRISTIANNE GUBA**  
**DONNELL MARLIN**  
**LARRY RYAN**  
**JACK SCHAAF**



#8

## Create a new faculty development program



Peter Cohen, Baylor College of Dentistry



Chester Swimley (left), Carl Andres, and Wilfrid Keaton, IU faculty



Dominick DePaola, Baylor College of Dentistry



IU workshop leader Gail Williamson



Bruce Baum, National Institute of Dental Research



IU faculty Marilyn Lantz with James McDonald (left), Leonard Koerber, and Larry Ryan



Connie Drisko, University of Louisville

Off-site and in-service training programs, faculty retreats, visits from dental consultants, and school-wide workshops have helped give shape to the faculty development program during the past fiscal year.

IUSD's academic vitality lies in the hands (and in the minds) of each faculty member. For the school's graduates to be among the best-educated dental professionals in the country, they must be taught by an exceptional team of faculty members. The tenet of the development program is that the best-prepared faculty members are those who never stop being students themselves.

Two years ago all full-time faculty members were interviewed by the administration so that individual needs could be assessed and faculty could be given an opportunity to voice their own interests in pursuing particular types of renewal programs.



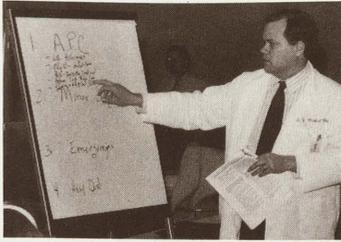
IU faculty conference, with Susan Zunt in foreground

Some faculty have since enrolled in PhD programs or are pursuing other types of short- and long-term graduate study. Two faculty members, Drs. Don-John Summerlin and Bruce Matis, completed intensive summer-long training programs at the University of Washington's Clinical Research Institute in Seattle. Dr. Byron Olson completed a six-month sabbatical at Lilly Research Laboratories, a division of Eli Lilly and Co., and Dr. Yoshiki Oshida recently accepted a year-long appointment as a visiting research scientist at the Paffenbarger Research Institute, National Institute of Standards and Technology, in Gaithersburg, Md. Dr. Gene Roberts began a six-month sabbatical at Lille University, Lille, France, in January 1995.

In-service training programs such as a graduate statistics course have been made available to faculty, and several committee and departmental "mini-retreats" have helped



Donald Schmitt and Mary Leesa Rehmel, IU faculty



*IU workshop leader Mark Wohlford*



*Douglas Jansen  
(DDS'94) and IU  
faculty member  
Gordon Arbuckle*

groups of faculty members refocus on their specific missions within the school.

Learning to see ourselves as students, patients, and the community see us, and gaining a clearer perspective of Indiana's role in the national picture of dental education, have been other important branches of the development program. The school has invited input from several professionals, including Dr. Bruce Baum, clinical director of the National Institute of Dental Research, Bethesda, who serves as a consultant to IUSD. Dr. Baum has made frequent trips to the school to counsel the faculty at large as well as individual departments. He has offered invaluable assistance in helping the school shape plans for implementing a medical model.

The faculty also participated in enlightening competency workshops led by Dr. Dominick DePaola, dean and president of Baylor College of Dentistry; Dr. Peter Cohen, the Baylor dental school's associate dean for planning and development; and Dr. Connie Drisko, chair of periodontics, endodontics, and dental hygiene at the University of Louisville School of Dentistry. Each shared astute insights and perspectives on topics pertinent to IU's revitalization program.



#9

**Devise and implement a new budgeting system to give the school's six departments more responsibility for generating and using funds**

The complexities of this initiative demand an extremely thorough and therefore lengthy analysis before changes to the budget can be implemented.

During the past fiscal year the school retained the services of Dr. Daniel DeHayes, of IU's Center for Entrepreneurship, to assist with the development of a new budget system. Dean Gilmore and Lynn Finkel, the dental school's fiscal director, reviewed a variety of budget systems during visits to several other dental schools whose financial structures are similar to IUSD's.

Because input from the department chairs will be critical to the success of an activity-based budget that places greater responsibility upon the departments, plans will not be finalized until leaders for each of the school's six departments are in place. During the 1994-95 school year, IUSD expects to complete the selection process for persons to chair the Department of Stomatology as well as the Department of Surgery and Hospital Dentistry.



#10

**Encourage faculty to make professional contributions that enhance the revenue of the school**

Actions to be taken on this initiative have been deferred until the new budgeting system is more clearly defined.



#11

**Establish a school-wide outcome assessment program for measuring the value of all school outputs**

For a newly assembled group of 25 employees and one student, no detail about the dental school is too insignificant to discuss. And no problem is too enormous to tackle. They are the **Total Quality Management Committee**—TQM for short—and they have made student and patient satisfaction their first priority as they scrutinize the dental school from bottom to top, searching for ways to make a good school even better.

Sub-teams under the TQM banner are examining five key issues related to the school:

- Transfer of Information
- Patient System (admitting, appointing, emergencies, record keeping)
- Clinics

## Total Quality Management

H. William Gilmore  
and Carole Busch, co-chairs

Cindy Corbin  
Janet Duncan  
Pamela Elliott  
Lynn Finkel  
LaForrest Garner  
Joseph Gregg  
Brady Hancock  
Hala Henderson  
Megeen Higgins  
William Hohlt  
Shirley Hubbard  
Patricia Huff  
Marilyn Lantz  
Rhonda Lee  
Hunter Rackley  
Philip Rake  
Barbara Rhodes  
Gene Roberts  
Donna Schaaf  
Barry Smith  
George Stookey  
Donald Tharp  
Mark Wohlford  
Susan Zunt

## TQM Teams

Transfer of Information  
Patient System  
Clinics  
Research  
Student and Alumni Satisfaction

- Research
- Student and Alumni Satisfaction

"Many other people in addition to members of TQM will get involved in finding solutions to problems that are uncovered," says Carole Busch, IUSD's director of admissions who co-chairs TQM with Dean Gilmore. The committee already has canvassed the IUSD faculty and staff, asking not only for help in "red-flagging" problems in the system but also for suggestions on how the school can solve those problems and further enrich its academic programs.

"The most beneficial aspect of the committee's membership is that it covers all points of view, including those of the administration, faculty, staff, students, and patients," says Ms. Busch. "Our goal is to make the school run more efficiently by involving everyone in the changes. We want both students and patients to be satisfied with the services they receive here."

Since the group wasn't formed until the close of the fiscal year, it was still primarily in its embryo stage at the time of this writing. But small improvements were evident even at this early point. For example, the library finally acquired a much-needed photocopier, which has eliminated the highly inconvenient and impractical custom of requiring patrons to leave the library in order to duplicate materials (they previously used public copiers in the basement and on the third floor).

In another maneuver, mail delivery to individual departments was discontinued. Doing away with the twice-a-day, to-your-door service has provided no hardship to the departments, and it has freed up several hours of employee Marilyn Herald's time for more productive contributions to the school. Marilyn is now a full-time representative in the mail services and copy center facility, a division with extremely heavy employee and student traffic. In the old routine, employees crossed their

fingers and hoped that the duplicating machines didn't go on the blink or that the fax machine didn't run out of paper during Marilyn's morning and afternoon mail runs. Her support, which includes expert knowledge of postal regulations and other aspects of office management, is important to the orderly, day-to-day business of operating the school. Marilyn Herald's full-time availability helps keep everyone else's projects on track.

The TQM group found a simple solution—and one that benefited everyone at the school.

The committee will continually evaluate small and large systems of operation, all of which significantly impact the outputs of the school. Processes that absorb the greatest amount of the school's resources (time, supplies, money) will be examined, and other activities will be reviewed to ensure that each has the greatest positive impact on the education, research, and services provided by IUSD.



#12

## Expand the sponsored research program

The School of Dentistry's research program underwent enormous growth during fiscal 1993-94, with a 51.3 percent increase in extramural research funding compared to the past fiscal year, and a 90 percent increase in non-government sponsored research. The increased funding generated more than \$250,000 in excess indirect costs, which the school is reinvesting in the research program by purchasing instruments, supporting undergraduate and graduate student fellowships, sponsoring a faculty seminar program, and contributing to the cost of recent renovations.

In 1993 Dr. George Stookey, associate dean for research, and the Research Committee embarked upon an ambitious path to double, in just four years, the dollar amount of IUSD's sponsored research—from \$4.6 million (the 1993 figure) to \$9.2 million. All departments have submitted a list of their perceived research strengths as well as strategies for developing or expanding research in specific areas.

A team of researchers headed by Dr. Marilyn Lantz, newly appointed chair of the Department of Oral Biology, adds an important dimension to the school's research program, whose growth and prosperity are contingent upon increased acquisition of sponsored projects (i.e., research funded by non-university resources).

Of the school's 94 full-time faculty members employed during the past year, 65 made commitments to be involved in sponsored research, including 42 faculty members who had not been involved during the

## 37,510 SQUARE FEET OF RESEARCH OPPORTUNITIES

*IU School of Dentistry Research Facilities,  
by Location*

**ORAL HEALTH RESEARCH INSTITUTE**  
415 North Lansing Street

**DENTURE RESEARCH FACILITY**  
719 Indiana Avenue  
(3,000 sq. ft. of leased space in Walker Plaza not included in total)

**SCHOOL OF DENTISTRY**  
1121 West Michigan Street

Floor 5	Bioresearch Facility (for studies involving animal models)
Floor 4	Clinical Research Facility Cell Culture Laboratory and Biocompatibility Core Facility
Floor 3	
Floor 2	Biomechanics Research Laboratory Bone Research Laboratory Molecular Biology Research Laboratories I and II Oral Biology Research Facility Microbiology Laboratory Oral and Maxillofacial Imaging Research Facility
Floor 1	Dental Materials Laboratories
Basement	Scanning Electron and Laser Scanning Confocal Microscopy Facility Oral Histology Laboratory Oral Pathology Laboratory

preceding year. Sixteen faculty members who were already conducting funded studies agreed to increase the percent of time they devote to this type of research.

The amount of time individual faculty members have pledged to spend in pursuit of funded research activities ranges from 1 to 100 percent, with funding for salaries and supplies to be provided from extramural grants. Simultaneously, internal (IUSD) research support will be eliminated, with all costs provided by grants, contracts, and excess indirect costs. The goals must be obtained by 1997, the final year of the Strategic Plan.

There will soon be an even greater variety of places for faculty and student research to be conducted. When major renovations to the school's second floor are completed, the IU dental school will have added

nearly 5,000 square feet of new laboratory space, making a total of 37,510 square feet of space committed to research. Half the cost of this \$1.2 million project was covered by external grants; the remainder will be paid from excess indirect costs over the next two to three years. A grant for \$225,000 from the National Institutes of Health has made it possible for the school to expand and renovate the Bioresearch Facility (formerly called the Animal Research Facility) housed on the school's fifth floor.

The figures on page 19 provide the name and location of each facility associated with IUSD's research program. The past year's remarkable record of achievement, and commitments from the departments and faculty to aggressively pursue their research goals, have propelled Indiana University much closer to its objective of building one of the top dental research programs in the nation.

### Introducing the "Double Docs"

Full- and part-time dental school faculty members holding a PhD degree as well as a degree in dentistry

JAMES K. HARTSFIELD, JR.  
PhD in medical sciences, University of South Florida, 1993  
DMD, Medical University of South Carolina, 1981

JANET M. HOCK  
PhD in medical studies, University of London, 1974  
BDS, University of London, 1966

THOMAS R. KATONA  
DMD, University of Pennsylvania, 1982  
PhD in mechanical engineering, University of Pennsylvania, 1981

MICHAEL J. KOWOLIK  
PhD in medical genetics, University of Edinburgh, 1984  
BDS, University of Edinburgh, 1973

MARILYN S. LANTZ  
DMD, Southern Illinois University, 1977  
PhD in biochemistry, City University of New York, 1974

YIMING LI  
PhD in dental science, Indiana University, 1987  
DDS, Shanghai Second Medical University, 1977

KICHUEL K. PARK  
PhD in preventive dentistry, Seoul National University, 1967  
DDS, Seoul National University, 1962

W. EUGENE ROBERTS  
PhD in anatomy, University of Utah, 1969  
DDS, Creighton University, 1967

MARK A. SAXEN  
PhD in pharmacology and toxicology, Medical College of Virginia, 1993  
DDS, Case Western Reserve University, 1978

MARK M. WINKLER  
PhD in biological materials, Northwestern University, 1991  
DDS, Louisiana State University, 1981

MARK E. WOHLFORD  
PhD in pathology, The Ohio State University, 1992  
DDS, University of Iowa, 1985

### Joint Appointments

Full-time dental school faculty members holding appointments in other IU schools

MOSTAFA ANALOUI  
assistant professor of dental diagnostic sciences; adjunct assistant professor of electrical engineering (School of Engineering and Technology)

JOSEPH P. BIDWELL  
assistant professor of periodontics; assistant professor of anatomy (School of Medicine)

JIE CHEN  
assistant professor of orthodontics; assistant professor of mechanical engineering (School of Engineering and Technology)

LAWRENCE P. GARETTO  
associate professor of orthodontics; associate professor of physiology and biophysics (School of Medicine)

RICHARD L. GREGORY  
associate professor of oral microbiology; associate professor of pathology and laboratory medicine (School of Medicine)

JAMES K. HARTSFIELD, JR.  
associate professor of oral facial genetics; associate professor of medical and molecular genetics (School of Medicine)

THOMAS R. KATONA  
assistant professor of orthodontics; assistant professor of mechanical engineering (School of Engineering and Technology)

YIMING LI  
associate scientist, Oral Health Research Institute; adjunct associate professor of pharmacology and toxicology (School of Medicine)

CHRIS H. MILLER  
professor of oral microbiology; professor of microbiology and immunology (School of Medicine)

BYRON L. OLSON  
professor of preventive and community dentistry; professor of biochemistry and molecular biology (School of Medicine)

W. EUGENE ROBERTS  
professor of orthodontics; professor of physiology and biophysics (School of Medicine); adjunct professor of mechanical engineering (School of Engineering and Technology)

# RESEARCH FUNDING

EXTRAMURAL RESEARCH FUNDING	\$7,271,461
INTRAMURAL (IUSD) RESEARCH SUPPORT	\$ 802,732
SCHOOL OF DENTISTRY RESEARCH TOTAL	<u>\$8,074,193</u>

## EXTRAMURAL FUNDING

Research, Service, and Testing Programs Funded  
by Non-government Sponsors

**\$5,247,556**

Research Sponsored by Federal Government

**\$1,349,897**

Research Support Sponsored by Indiana  
University Funds (other than dental school funds)

**\$648,472**

Federal Training Grants and  
Educational Programs

**\$15,536**

Research and Service Sponsored  
by State Government

**\$10,000**

Total

**\$7,271,461**

## EXTRAMURAL FUNDING BY DIVISION

Oral Health Research Institute

**73.90%**

Research Administration and Student Affairs

**9.18%**

Oral Facial Development

**5.82%**

Oral Biology

**5.56%**

Periodontics and Allied Dental Programs

**3.52%**

Restorative Dentistry

**1.14%**

Surgery and Hospital Dentistry

**0.57%**

Stomatology

**0.31%**

## Federal Training Grants and Educational Programs

Principal Investigator	Title	Budget
George Stookey	Short-term research training	\$15,536

## Research and Service Sponsored by State Government

Principal Investigator	Title	Budget
Donald Arens	Continuing education course: Dentistry for children with special healthcare needs	\$10,000

## Research Sponsored by Federal Government

Principal Investigator	Title	Budget
George Stookey	Small instrumentation grant	\$5,000
Janet Hock	Hormonal regulation of bone growth in vivo	22,354
Christopher Hughes	Cloning and purification of <i>Veillonella</i> adhesion	37,978
Jack Schaaf	Ryan White HIV/AIDS dental reimbursement program	7,309
Jacqueline Davis	Physician Scientist Award: Role of T cell in pathogenesis of TMJ rheumatoid arthritis	34,305
George Stookey	Pharmacological effects of fluoride (year 3)	598,482
Janet Hock	Hormonal regulation of bone growth in vivo	197,414
Richard Gregory	Role of T cell in pathogenesis of TMJ rheumatoid arthritis	72,495
W. Eugene Roberts	Cell kinetic and histomorphometric analysis of microgravitational osteopenia	110,983
W. Eugene Roberts	Bone physiology of endosseous implants (year 5)	132,579
LaForrest Garner	Minority High School Research Apprentice Program	21,000
W. Eugene Roberts	Cell kinetic and histomorphometric analysis of microgravitational osteopenia	109,998

## Research, Service, and Testing Programs Funded by Non-government Sponsors

Principal Investigator	Title	Budget	Principal Investigator	Title	Budget
Chris Miller	Ultrasonic cleaning of dental instruments in a variety of cassettes	24,733	Bradley Beiswanger	Screening and selection of qualified subjects for potential future calculus inhibiting clinical trials	89,744
George Stookey	In situ evaluation of the effect of an improved stannous fluoride uptake in incipient enamel lesions	37,002	George Stookey	Basic research support for investigation of PMN leukocyte mechanisms and development of research models	300,000
Timothy Carlson	Clinical evaluation of lathe-cut high copper amalgams: 10-year reassessment	2,798	George Stookey	Preventing calculus formation in exotic animals	11,560
Bradley Beiswanger	Effect of two experimental chewing gums containing abrasives as compared to a commercially available chewing gum	106,907	W. Eugene Roberts	Relationship of wound healing and angiogenesis to the cell kinetics of the initial osteogenic response in orthopedically expanded anterior maxillary suture in the rat	4,834
Janet Hock	Investigation of osteoblast differentiation in vitro induced by vpr, a regulatory gene of the Human Immunodeficiency Virus	3,500	Jeffrey Platt	Correlation of clinical and laboratory performance of five dentin bonding agents	16,155
LaForrest Garner	Two scholarships for African-American students to attend IUSD	10,000	Bradley Beiswanger	Effect of chewing gum on dental caries incidence	140,976
Bradley Beiswanger	Evaluation of an experimental toothbrush to remove dental plaque and reduce gingivitis in a panel of adult volunteers	28,748	David Avery	Comparison of IgA antibody levels to <i>Streptococcus mutans</i> in caries-active children before and after dental treatment	1,862
E. Brady Hancock	Randomized, single-blind multicenter controlled study of dental cleaning and scaling using Nd:YAG laser vs. conventional ultrasound techniques	23,562	David Avery	CLASS Project (outreach program for IPS School #44)	10,000
George Stookey	Clinical study assessing the safety and efficacy of two mouthrinses with differing concentrations of an active ingredient in commercially available mouthrinse	557,014	Kichuel Park	Study of the bioavailability and substantivity of antiplaque agents using a plaque glycolysis and re-growth model	15,000
Bradley Beiswanger	Development of a proprietary facility to conduct clinical research related to denture adhesive materials	599,229	George Stookey	Preventing calculus formation in dogs and cats	192,818
Arden Christen	Safety and efficacy of a transdermal nicotine system as an adjunct to a smoking cessation program in a dental care facility	120,000	Mark Wohlford	Use of thermal cycle sequencing to detect p53 mutations	4,000
Jeffrey Dean	Comparison of formocresol vs. electrosurgical pulpotomy procedures	7,500	Bradley Beiswanger	Clinical study of the effects of an experimental dentifrice on calculus formation in adults	60,844
Bradley Beiswanger	Effect of chewing gum on dental caries incidence (year 3)	885,032	Bradley Beiswanger	Clinical training program for the administration of VR-303-ABS into periodontal pockets	10,401
Beverly Flynn	Health in the Inner City: An Academic Challenge	15,214	Carlos Munoz-Viveros	Laboratory evaluation of new denture adhesive	4,900
James McDonald	Ability of test solutions to clean dental instruments and handpieces	11,183	George Stookey	Enamel fluoride uptake and mineral changes resulting from prolonged use of fluoridated dentifrices containing sodium bicarbonate	57,500
Chris Miller	Comparison of enamel fluoride uptake and mineral change following use of three sensitive-tooth dentifrice products	57,500	Bradley Beiswanger	Comparison of the effects of various treatment regimens on plaque/gingivitis levels	498,864
Michael Cochran	Clinical evaluation of a fiberoptic examination mirror	4,714	Bradley Beiswanger	Crossover clinical investigation to evaluate the pellicle stain cleaning efficacy of three silicate-based dentifrices with varying abrasivity levels	190,390
Michael Cochran	Retentive pin systems with bonding agents: an in vitro evaluation of retention and resistance	1,078	George Stookey	Postdoctoral student/fellow support	50,000
Margot Van Dis	Clinical evaluation of an illuminated dental mirror	3,483	George Stookey	Clinical study assessing the safety and efficacy of two mouthrinses with differing concentration of an active ingredient in commercially available mouthrinses	5,000
Evelyn Oldsen	Clinical evaluation of a fiberoptic examination mirror in various dental hygiene practice settings	3,420	Richard Gregory	Regulation of secretion of immune factors by epithelial cells	80,922
Mark Wohlford	Identification of p53 tumor suppressor gene mutations for the diagnosis of oral squamous cell carcinomas	35,000	E. Brady Hancock	Clinical training program for the administration of VR-303-ABS into periodontal pockets	8,796
			Numerous investigators	CONTRACT TESTING	955,373

# BUDGET

Indiana University School of Dentistry  
July 1, 1993—June 30, 1994

## General Fund

**OPERATING INCOME: \$20,015,365.92**



State Appropriation—60.66%



Student Tuition—17.81%



Clinic Income—13.70%



Other (reimbursement agreements and miscellaneous)—4.41%



Contract and Government for Administrative Services—3.42%

## OPERATING

**EXPENDITURES: \$19,955,240.53**



Salaries, Full-time Faculty—28.36%



University Assigned Costs for Central Services—18.13%



Salaries, Full-time Staff—16.71%



Supplies and Related Expenses—14.74%



Fringe Benefits and Retirement—14.47%



Salaries, Part-time Instructors—4.50%



Equipment—1.85%



Wages, Hourly Employees—0.78%



Library Books—0.39%



Travel—0.07%

**MISCELLANEOUS INCOME: \$1,198,628.19**

(excluding research funds and gifts to the IU Foundation)



Auxiliary (student instrument issue, etc.)—47.09%



Service (sterilization monitoring service, etc.)—27.53%



Continuing Education—19.44%



Other (fellowships, etc.)—5.94%

## MISCELLANEOUS

**EXPENDITURES \$1,230,296.18**



Auxiliary—41.10%



Continuing Education—23.95%



Service—26.09%



Other—8.86%

## Tuition at IUSD and Neighboring Schools

### **Tuition at the Nation's 54 Dental Schools**

First-year dental students  
1993-94 academic year

	Resident	Non-resident
Indiana University	\$7,650	\$15,875
Marquette University (Wisc.)	\$11,660	\$22,990
Northwestern University (Ill.)	\$22,728	\$22,728
The Ohio State University	\$6,810	\$20,814
University of Illinois	\$5,652	\$13,726
University of Iowa	\$4,998	\$14,624
University of Kentucky	\$5,348	\$12,118
University of Louisville	\$5,240	\$12,010
University of Michigan	\$11,383	\$20,897
University of Minnesota	\$7,800	\$11,700

*IU's tuition for in-state, first-year dental students was lower than the tuition at 27 dental schools, and higher than the tuition at 26 schools.*

*IU's tuition for non-resident, first-year dental students was lower than the tuition at 32 dental schools, and higher than tuition at 21 schools.*

*Source: American Dental Association's "Supplemental Report on 1993/94 Dental School Tuition," published by the ADA Survey Center*

## INCOMING CLASS PROFILES • 1994-95 Academic Year

	Dentistry DDS'98	Dental Hygiene ASDH'96	Dental Assisting Certificate '95	Postdoctoral Education (11 master's, PhD, and certificate programs)
<b>APPLICANTS</b>	728	160	47	514
Indiana Residents	146	153	47	not tallied in central office
Non-residents	582	7	0	not tallied in central office
Men	502	1	0	not tallied in central office
Women	226	159	47	not tallied in central office
Minority Applicants	45	3	2	not tallied in central office
<b>Matriculating Students</b>	<b>98*</b>	<b>50</b>	<b>24</b>	<b>38</b>
<b>STUDENTS</b>				
Indiana Residents	71	49	24	11
U.S. Residents (excluding Indiana)	21	1	0	9
Students from Other Countries	6**	0	0	18***
Men	70	1	0	24
Women	28	49	24	14
Minority Students	5	0	1	0
<b>Average GPA (4.0 scale)</b>				
Overall	3.20	3.05	2.40	not tallied
Science	3.11			
<b>Tuition (excluding ancillary fees)</b>				
In-state	\$8,492	\$2,858	\$2,949	\$8,492
Out-of-state	\$17,621	\$8,492	N/A	\$17,621
<b>Percent of Tuition Increase   from Previous Year</b>	11%	8%	8%	11%
<b>TOTAL ENROLLMENT</b>	<b>336 (4 classes)</b>	<b>97 (2 classes)</b>	<b>24 (1 class)</b>	<b>11 programs</b>

\*Actual class size of 100 includes two students who are repeating their first academic year.

\*\*Canada, Iran, Japan, Republic of Trinidad and Tobago, Syria

\*\*\*Brazil, Canada, Colombia, England, India, Philippines, Taiwan, Thailand, Turkey

# IUSD DEVELOPMENT

During 1993-94, the Indiana University School of Dentistry enjoyed a 50 percent increase over the previous fiscal year in the number of donors who contributed at the leadership level (\$1000+). More than 80 donors made gifts of at least \$1000, with 12 gifts of over \$5000 being made to the school.

These significant increases were due, in great part, to the creation of our newest donor society, the DEAN'S ASSOCIATES, which recognizes the leadership level of annual support. Three distinct levels of giving are recognized within the Dean's Associates: the PLATINUM SOCIETY (\$5000+ annually), the GOLD SOCIETY (\$2500—\$4999 annually), and the SILVER SOCIETY (\$1000—\$2499 annually). The Dean's Associates program is the brainchild of IUSD's Development Committee, chaired by alumnus Richard D. Ellsworth (DDS'73), Lafayette. Numerous former members of the Century II Fellows have opted to increase their annual giving to Indiana University School of Dentistry by becoming members of the Dean's Associates.

A total of \$341,691.87 was contributed to Indiana University Foundation for the IU School of Dentistry during the past fiscal year.

## *Spirit of Philanthropy Award Presented to Donald McKenzie*

Donald A. "Mac" McKenzie is a longtime friend of Indiana University School of Dentistry. In 1991 he initiated a fund drive which has raised nearly \$200,000 in gifts and pledges to IUSD. Mac organized the *Committee to Honor Dr. Ralph W. Phillips*, an IU faculty member and internationally respected innovator in dental materials research who passed away on May 17, 1991. The committee is composed of international leaders in dentistry. Mac McKenzie's efforts to recognize Dr. Phillips have created a significant endowment, which greatly benefits the IU School of Dentistry.

Mac resides in Scottsdale, Ariz., with his wife, Virgene. He holds a bachelor's degree in economics from Purdue University. Although Mac is not a dentist, he is known as a tireless contributor to the dental profession. Mac chairs the board of the American Dental Trade Association and serves on the board of directors of the American Fund for Dental Health. He is president of the dental materials group of the American Association for Dental Research and is a member of the house of delegates of the American Association of Dental Schools.



*Spirit of Philanthropy award recipient Donald McKenzie (standing) with his wife, Virgene; their daughter, Mary Lejeune; and Dr. Maynard Hine, IUSD dean emeritus and IUPUI chancellor emeritus*

## *IUSD Benefits from Planned Gifts*

Each year, more alumni and friends of the school are including IUSD in their estate plans. In this way, donors make substantial contributions to the school in ways that are not financially feasible with annual gifts. Many people find that they can make major gifts to the school in one of several ways: by including the IU School of Dentistry in their will, by making a gift of life insurance, or by arranging for a charitable gift annuity or trust.

Significant bequests were received in 1993-94 from the estates of two longtime members of the alumni and friends of the school.

DOUGLAS H. WHITE, SR.

Douglas H. White, Sr. (DDS'18, Indiana Dental College), had a long and distinguished dental career in Indianapolis. Among his many accomplishments, Dr. White served as president of the IUSD Alumni Association and was the first recipient of the IU Alumni Association's Maynard K. Hine Award, which is named for IU's dean emeritus of dentistry and chancellor emeritus of IUPUI. The award is bestowed upon graduates who have made significant contributions to the IUPUI campus.

Dr. White continued his relationship with the school throughout his career and was counted on regularly for his many contributions of time and talent. He set an example to which we all may aspire.

Before his death on January 31, 1994, Dr. White had made a provision for IUSD in his estate plan. His significant financial contribution to the Dental School Priority Fund is providing support for our faculty and students which otherwise would not be available. Our school is a better place, thanks to the many outstanding contributions of Dr. Douglas White.

RONALD F. NIRSCHL

Dr. Ronald Nirschl (MSD), a 1979 graduate of IU's postdoctoral program

in pediatric dentistry, had been serving in recent years as director of undergraduate pediatric dentistry at the University of Pittsburgh School of Dental Medicine. Shortly before his death in February



Ronald Nirschl

1994, Dr. Nirschl contacted IUSD to indicate his interest in supporting dental research through an estate plan. Upon reviewing the many estate plan vehicles available, Dr. Nirschl—a 1987 recipient of the American Fund for Dental Health's prestigious Hillenbrand Fellowship in Dental Administration—made a gift to our research program by leaving a percentage of his retirement accumulation to the school. IUSD's ever-growing research program will have an expanded opportunity to further the dental profession because of the generosity of this alumnus. With great foresight and the stroke of a pen, he made a gift which can be of great benefit to the entire profession.

### James W. Huckelberry, DDS Scholarship Fund

Indianapolis resident Ama Huckelberry, the widow of James W. Huckelberry (DDS'24, Indiana Dental College), has notified us of her intent to create a scholarship endowment, which will be the largest ever held by the IU School of Dentistry. The James W. Huckelberry, DDS Scholarship endowment will be funded through Mrs. Huckelberry's estate.

Dr. Huckelberry, who died in 1991, worked his way through dental school during very difficult financial times. His dedication and perseverance paid off and led to a lifelong dedication to his own career as well as to the profession at large. Dr. Huckelberry realized the value of his Hoosier education in dentistry; together, he and Ama participated in the entire spectrum of dental programs and associations. Ama is a founder of the Indiana Dental Association's Auxil-

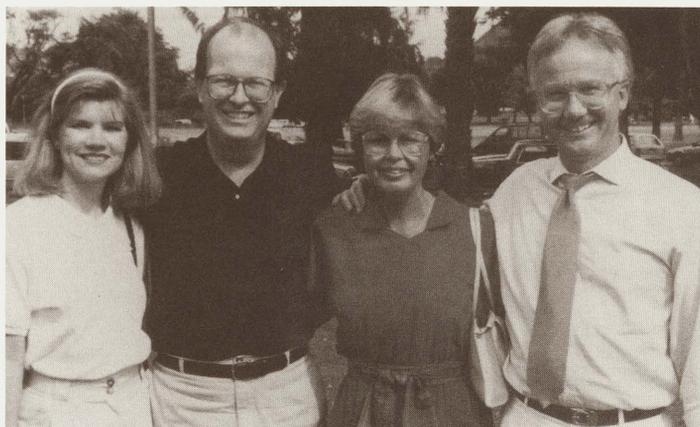
ary, and her husband served as the IDA president. During the IU Foundation's *Campaign for Indiana*, the Huckelberrys made a major gift that set an example for and challenged other donors to increase their commitments.

It was Dr. Huckelberry's wish to provide funding that would help dental students avoid working full-time jobs while in school. Through her estate plan, Mrs. Huckelberry has made a provision for IUSD students that will likely help many students devote time to their studies rather than to full-time work.

James and Ama Huckelberry shared a special commitment to our school throughout their life together. We are grateful for the Huckelberrys' long history of supporting the school, and for Ama's continued generosity.

### Steven L. Bricker Scholarship Fund

Indiana University and the health professions suffered a significant loss with the passing of IUSD faculty member Steven L. Bricker (DDS'74) on March 21, 1994. A nationally recognized teacher in oral diagnosis and oral medicine, Steve is remembered as a gentleman whose concern for his students, friends, and colleagues was warm and genuine. Dr. Bricker pursued excellence for his department, university, and profession with unending determination. As chair of the school's former department of diagnostic sciences, Steve Bricker set a standard for excellence.



Steven Bricker (second from left) with his wife, Shirene, at left, and friends Kathryn and Dale Miles



James Huckelberry (at the podium, with Dean Gilmore) addressed IUSD employees and students during a reception held at the school in 1987 to honor Dr. and Mrs. Huckelberry.

Dr. Bricker's colleagues and students have created a scholarship endowment to permanently recognize his contributions to our school and profession. The Bricker scholarship will provide support for IU students engaged in graduate and postgraduate work in stomatology. This endowment is a fitting tribute to a man who made a difference. It will enable us to realize one of Steve's passions—supporting students. The first donor on the list was IUSD's DDS Class of 1994.

If you would like to remember Steve by contributing to his endowment, please make a check payable to the IU Foundation—noting on the check that the contribution is for the Steven Bricker endowment—and send it to the Development Office in care of Indiana University School of Dentistry.

Barry Smith  
IUSD Director of Development

# IUSD SAYS GOODBYE TO A GOOD FRIEND

**T**he IU School of Dentistry lost a great friend and supporter with the passing last summer of longtime Gary, Ind., dentist Paul H. Asher (DDS'27). In 1993 Dr. Asher made a major gift to the IU Foundation that was used to help link the dental school to a worldwide computer network. His generous gift has helped the dental school acquire a world-class communications system that will revolutionize the way the school relates to students, alumni, Indiana's dental professionals, and a host of other groups throughout the state and nation.

Barry Smith, IUSD director of development, wrote a profile of Dr. Asher when he made his gift to the school in 1993.

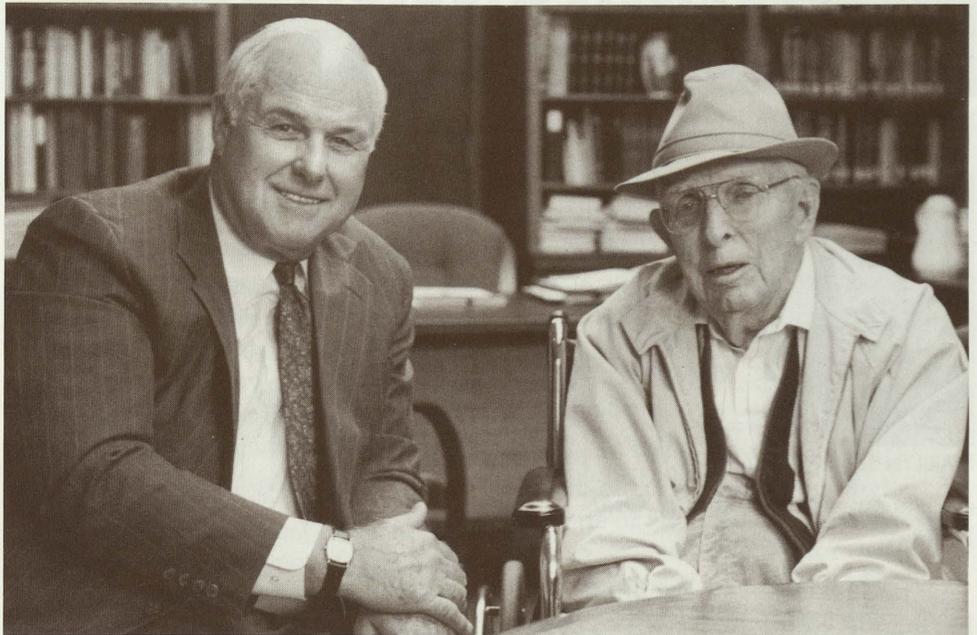
Here's what *The Post-Tribune*\* of Gary had to say about this fine gentleman, upon his death:

Paul H. Asher, a longtime Gary dentist, died July 24 in Indianapolis at the age of 96.

Dr. Asher, who held a family practice in Gary for 48 years before retiring to the Indianapolis suburb of Greenwood in 1975, was president of the Indiana Dental Association in 1957.

"He liked Gary," said Dr. Asher's daughter, Mary Anne Hannah of Valparaiso. "He started his practice here and really loved it.

"He went to work at 6 o'clock in the morning and came home at 6



*A few weeks before his death Dr. Paul Asher visited with Dean H. William Gilmore at the school.*

o'clock at night. A lot of his patients worked in the mill, and they came in before or after they went to work."

Dr. Asher also was active in local service groups, serving as president of the Gary Rotary Club, and he was a member of the American Legion in Gary for 40 years. He was part of a drive by local professionals to raise money for hospitals in Gary during the late '60s.

He was an active member of the American Dental Association, serving on its House of Delegates and Judicial Council. He also was a fellow of the American College of Dentists and a past president of the Northwest Indiana Dental Society.

Hannah recalled her father's passion for the profession.

"He loved dentistry, loved what he did," she said. "He was a very good technician and liked the engineering part of it. He did everything himself, root canals, everything, all of his own lab work. He was a real family dentist."

Even when he was in his 80s and living in a retirement community, Dr. Asher continued to pursue his craft. He had a small office where he did minor procedures for fellow residents, Hannah said.

Dr. Asher was born on a farm near Gosport in 1897 and came to Gary in 1927 after graduating from Indiana State University and IUSD.

After retirement, he returned to his family's farm in Owen County.

His wife, Irene, died in 1993. In addition to his daughter, Dr. Asher is survived by a nephew he raised, retired Lt. Col. Thomas E. Boots of Reston, Va. He also had three grandchildren and three great-grandchildren.

\*Reprinted with permission of the editor. The author is *Post-Tribune* staff writer John Pletz.

# TRANSITIONS

## Oral Biology Chair Appointed



MARILYN S. LANTZ

In August 1994 the School of Dentistry welcomed the arrival of Dr. Marilyn S. Lantz, who has accepted an appointment as professor of oral biology and chair

of IU's new Department of Oral Biology.

She comes to Indiana after having served for three years as chair of the Department of Periodontics at the University of Pittsburgh School of Dental Medicine.

Dr. Lantz holds four degrees, including an MSD in periodontology from the University of Connecticut (1984); a DMD from Southern Illinois University (1977); a PhD in biochemistry from City University of New York (1974); and a BA in chemistry from Queens College, Flushing, N.Y. (1967).

From 1984 to 1991 Dr. Lantz taught periodontics and microbiology on the dental faculty at the University of Alabama at Birmingham. Prior to enrolling in the periodontics program at Connecticut, she taught in the diagnostic specialties department at Southern Illinois University for four years.

For the past decade Dr. Lantz has been the principal investigator on several research grants funded by the National Institute of Dental Research (NIDR). Her research is directed toward understanding the mechanisms by which bacteria interact with host tissues in the development of periodontal diseases. The long-range

goal of these studies is to develop strategies to prevent and treat periodontitis.

In 1987 Dr. Lantz was invited by the National Institutes of Health to participate in a review of periodontal disease research centers. In 1993 she completed a four-year term as a member of the NIH-NIDR Oral Biology and Medicine Study Section.

Dr. Lantz belongs to the editorial boards of the *Journal of Periodontology* and *Current Opinion in Dentistry*. Her scientific papers and abstracts appear in such publications as the *Journal of Bacteriology, Infection and Immunity*, the *Journal of Periodontal Research*, and the *Journal of Dental Research*. She is a member of Omicron Kappa Upsilon dental honor society.



As of this writing searches continue for administrators to chair the school's Department of Surgery and Hospital Dentistry and the Department of Stomatology.

Resignations were accepted during the past fiscal year from Dr. Maxwell H. Anderson, chair of restorative dentistry; and Dr. Charles L. Nelson, chair of surgery and hospital dentistry.

The Departments of Oral Facial Development, Periodontics and Allied Dental Programs, and Restorative Dentistry are chaired by Drs. W. Eugene Roberts, E. Brady Hancock, and George P. Willis, respectively.



## Full-time Faculty Appointments

ROGER L. ISAACS,  
associate scientist, Oral  
Health Research Institute



Dr. Isaacs' career has come full circle since he first conducted dental studies for IU as a part-time researcher/full-time dental student nearly 30 years ago.

Throughout his four years of dental school Dr. Isaacs performed statistical analyses on caries studies for the Institute, which was known then as the Preventive Dentistry Research Institute.

Dr. Isaacs was employed for three years in the dental research section of the Procter & Gamble Co., in Cincinnati, after he earned the DDS degree in 1969. (He also holds a baccalaureate degree in mathematics from IU, having graduated with distinction in 1963.)

Dr. Isaacs had been a private practitioner in Bloomington since 1972. During his years in practice he continued to serve as a part-time clinical testing consultant, working at universities, hospitals, and companies in the U.S., Canada, Mexico, and Central America.

Dr. Isaacs belongs to Phi Beta Kappa and Phi Eta Sigma honor fraternities and is a past president of the Bloomington and South Central Indiana dental societies. He currently is president of the Indiana University School of Dentistry Alumni Association.

PAMELA A.  
MESENBRINK, clinical  
assistant professor of  
dental hygiene



Professor Mesenbrink served during the past academic year as the junior clinic coordinator of the dental hygiene

program at Sheridan College, Sheridan, Wyo.

She graduated from dental hygiene programs at Forsyth School for Dental Hygienists, which is affiliated with Northeastern University, Boston, Mass., earning an Associate of Science degree (cum laude, 1989) and a Bachelor of Science (summa cum laude, 1992). In 1993 she earned a master's degree in dental hygiene education from the University of Missouri-Kansas City.

Professor Mesenbrink's graduate thesis addressed the demographics and oral health characteristics of Hispanic women and children in a supplemental food program. Included among her findings was a strong correlation between the oral health of mothers and their children, as well as between children and their siblings. She presented her results at the annual session of the International Association for Dental Research in Seattle, Wash., last March.

In addition to her academic activities, Professor Mesenbrink brings to her position at IU five years of experience in private practice. She has been both a full-time and part-time practitioner and has worked in offices in New Hampshire, Massachusetts, and Missouri.

During her education at the University of Missouri-Kansas City Professor Mesenbrink received a Chancellor's Graduate Research Assistant Award, a Chancellor's Non-resident Award, and an award from the Alumni Women's Council.

EDWIN T. PARKS,  
assistant professor of  
dental diagnostic  
sciences



Dr. Parks joins the IU faculty after having served for one year as a visiting instructor in IU's Department of Stomatology. He originally came to Indiana in 1991 as a graduate student in dental

diagnostic sciences; he completed requirements for a certificate in that program in 1994.

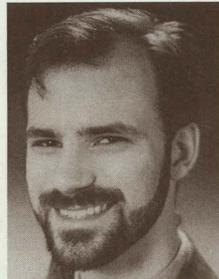
Dr. Parks is a 1981 dental graduate of the University of Kentucky, Lexington. He also holds a bachelor's degree (1977) in biochemistry and molecular biology from Centre College, Danville, Ky.

From 1983 to 1991 he practiced part time in Bowling Green, Ky., and held a faculty appointment in the Department of Allied Health at Western Kentucky University. Before that Dr. Parks was a part-time faculty member in the dental hygiene department at Hazard (Ky.) Community College and a practitioner in Whitesburg, Ky.

Dr. Parks currently chairs the American Association of Dental School's Section on Oral and Maxillofacial Radiology. He is a manuscript reviewer for the oral and maxillofacial radiology section of *Oral Surgery Oral Medicine Oral Pathology*. He has written a chapter on dental radiography for a textbook, *Contemporary Dental Assisting*, edited by Darlene Novak.

Dr. Parks is a former president of the Kentucky Consortium on Dental Auxiliary Education and an honorary member of the Kentucky Dental Hygienists' Association. Last year he received the Howard R. Raper Award for Excellence in Oral and Maxillofacial Radiology, which was presented to him by IUSD and the American Academy of Oral and Maxillofacial Radiology at the academy's annual session in San Francisco.

SCOTT T. ROSENFELD,  
research associate, Oral  
Health Research Institute



Dr. Rosenfeld is a 1992 dental graduate of Indiana University and a 1988 graduate of DePauw University's baccalaureate program in organic chemistry. He serves as a project

dentist at the Oral Health Research Institute.

Since October of 1992 Dr. Rosenfeld has practiced part time as an associate to Perry A. Wainman (DDS'72), Greencastle.

LECH M. SWITALSKI,  
associate professor of  
oral biology sciences



Dr. Switalski holds a BS degree in biology (1969) and an MS in microbiology (1970) from Warsaw University, Poland. In 1977 he earned a PhD degree in medical microbiology from the National Institute of Hygiene in Warsaw, where he also served as faculty for three years. He was a postdoctoral fellow at the Infectious Diseases Section of the Department of Pediatrics at the University of Minnesota (1978), and at the Department of Bacteriology, Swedish University of Agricultural Sciences, in Uppsala, and the National Bacteriological Laboratory, in Stockholm (1980-82).

In 1982 Dr. Switalski came to the U.S. as a visiting scientist at the Institute of Dental Research, University of Alabama at Birmingham (UAB), and then pursued his career in UAB's microbiology department.

Dr. Switalski's projects include studying the adherence mechanisms of pathogenic bacteria to host tissue, in particular identifying surface components of bacteria and components of host extracellular matrix which mediate adherence. He was a member of a research team that identified and characterized a fibronectin adhesin of *Staphylococcus aureus*.

His later studies, supported by grants from the Arthritis Foundation (1989-1994), involved the interactions of *S. aureus* with collagen (in the pathogenesis of infectious arthritis and osteomyelitis) and of *Borrelia burgdorferi* with cartilage proteoglycan (in the pathogenesis of Lyme disease).

After joining the periodontics faculty at the University of Pittsburgh in 1991, he pursued NIH-funded projects on novel mechanisms of attachment of oral bacteria, which are implicated in the etiology of root surface caries.

Dr. Switalski is the author and coauthor of 50 publications. He has co-organized two international symposia on the Molecular Mechanisms of Microbial Adhesion (1988 and 1990).

Dr. Switalski comes to Indiana as a member of Dr. Marilyn Lantz's teaching and research team. He has collaborated with her on several projects concerning the interactions of periodontal pathogens with connective tissue components—fibronectin and fibrinogen.



The appointment of new faculty member Dr. Mostafa Analoui, who joined the Department of Stomatology last winter, was announced in the spring '94 issue of the *Alumni Bulletin*.



### Part-time Faculty Appointments

#### DEPARTMENT OF SURGERY AND HOSPITAL DENTISTRY

*Clinical Assistant Professors of Oral and Maxillofacial Surgery*

Bussard, David A. (DDS'77, IU)  
Faulk, Dan E. (DDS'83, IU)  
Lapp, Thomas H. (DDS'68, IU)  
Lentz, R. Dale (DDS'67, IU)  
Moening, John E. (DDS'83, IU)

*Assistant Professors of Oral and Maxillofacial Surgery*

Bergman, R. Todd (DDS'90, IU)  
Butler, David F. (DDS'82, IU)  
Gilbert Schinbeckler, Lesley (DDS'86, IU)  
Kapp, Michael G. (DDS'90, IU)

#### DEPARTMENT OF PERIODONTICS AND ALLIED DENTAL PROGRAMS

*Instructors in Dental Hygiene*  
Grannan, Ronda L. (BS'77, Ball State University)

Krietenstein, Donna L. (BS'93, IU)

#### DEPARTMENT OF ORAL FACIAL DEVELOPMENT

*Instructor in Orthodontics*  
Thingstad, Connie S. (BA'89, Purdue University)

*Instructors in Pediatric Dentistry*  
Bolski, Elise (DDS'88, University of North Carolina)  
Martine, Niki J. (DDS'90, IU)

*Assistant Professors of Pediatric Dentistry*  
Hiester, John D. (DDS'90, IU)  
Irwin, Christina K. (DMD'86, Oregon Health Sciences University)  
Ison, Thomas G. (DMD'89, University of Kentucky)  
Winn, Terri A. (DDS'84, IU)

#### DEPARTMENT OF ORAL BIOLOGY

*Adjunct Professor of Oral Microbiology*  
Hsiung, Hansen M. (PhD'75, University of Illinois)

*Adjunct Professor of Oral Biology and Periodontics*  
Kowolik, Michael J. (PhD'84, BDS'73, University of Edinburgh)

#### DEPARTMENT OF RESTORATIVE DENTISTRY

*Instructors in Operative Dentistry*  
Kugar, Jennifer R. (DDS'88, IU)  
Mosele, Paul A. (DDS'68, IU)  
Sawyer, David H. (DDS'61, IU)  
Smith, Barbara F. (DDS'94, IU)  
Wainman, Melissa D. (DDS'89, IU)

*Visiting Assistant Professor of Operative Dentistry*  
Yamazaki, Noboru (DDS'92, IU)

*Clinical Assistant Professor of Endodontics*  
Nasser, Thomas K. (DDS'90, IU)

*Clinical Associate Professor of Dental Materials and of Prosthodontics*  
Naylor, W. Patrick (DDS'78, Georgetown University)

*Assistant Professor of Endodontics*  
Ramsey, Douglas L. (DDS'91, IU)

*Assistant Professors of Prosthodontics*  
Bishop, Christine (BDS'81, University of Birmingham, England)  
Min, Aye (DMD'85, University of Connecticut)

#### DEPARTMENT OF STOMATOLOGY

*Instructors in Dental Diagnostic Sciences*  
Ditslear, Cynthia S. (DDS'94, IU)  
Cloys Randall, Lisbeth A. (DDS'91, IU)

*Instructor in Oral Pathology*  
Ganatra, Seema (DDS'89, University of Alberta)

*Assistant Professor of Dental Diagnostic Sciences*

McDonald, Scott W. (DDS'75, IU)

### Retirements

ROSARIO H. POTTER, professor of oral facial genetics and director of dental biometry and research computing



Dr. Potter's distinguished career at Indiana University spanned 30 years, including the first four as a research associate in the School of Medicine.

Serving primarily in two capacities at IU, as geneticist and statistician, Dr. Potter divided her time between conducting her own research and performing statistical analyses on the research of others. She was named director of dental biometry and research computing in 1985. Over the years she applied her expertise as a statistician and biometrician to grant applications and research projects for many graduate students, faculty and staff members, and visiting researchers. She conducted seminars in statistics and research design for faculty and graduate students.

Biometrical and quantitative genetics has held a fascination for Dr. Potter throughout her career. She is especially interested in the work of genetic epidemiologists, who study diseases that are chronic, common to the population, and caused by a combination of genetic and environmental factors. Dr. Potter participated in a number of twin and family studies led by Dr. Joe Christian, the IU medical school's chair of medical and molecular genetics and a national expert in twin studies. In the early 1980s she was the primary investigator for more than a half-million dollars of research funded by the National Institutes of Health and the American Fund for Dental Health.

Dr. Potter's educational background includes a postdoctoral certificate in pediatric dentistry from

the Eastman Dental Center, Rochester, N.Y. (1960); a master's degree in medical genetics from IU (1967); a master's degree in pediatric dentistry from the University of Oregon (1963); and a dental degree, awarded summa cum laude, from the University of the East, Manila, Philippines (1952).

For years the NIH called upon Dr. Potter to serve on ad hoc committees that review grant proposals for projects related to genetics. In 1983 she presented a lecture series in Beijing, China, at the request of the World Health Organization.

Dr. Potter has contributed numerous articles to the scientific literature and written several textbook chapters. Since 1967 she has served as an ad hoc reviewer for five scientific journals, including the *Journal of Craniofacial Genetics and Developmental Biology*. Her biography has appeared in *Who's Who in America* and in more than a dozen similar publications listing notable scholars. She was profiled in the summer 1991 issue of the *Alumni Bulletin*.

A. GEORGE WAGNER,  
professor of  
prosthodontics



Dr. Wagner arrived at IU a decade ago to assume the chairmanship of the former Complete Denture Department. He served in that capacity with excellence and continued to preside over complete denture when it became a section of prosthodontics in 1986.

Dr. Wagner chaired prosthodontics at the University of Kentucky, Lexington, from 1980 to 1984. Before that he was in the U.S. Army, serving in a variety of posts in West Germany and the U.S., including a stint as chief of the technical branch of regional dental activity at Walter Reed Army Medical Center, Washington, D.C., in the 1960s.

A 1954 dental graduate of the University of Michigan, Dr. Wagner also earned a bachelor's degree from Albion (Mich.) College ('51) and a master's degree in prosthodontics from the University of Missouri-Kansas City ('68).

Throughout his career Dr. Wagner has presented a large number of continuing education courses and table clinics. One of his clinics that pertains to duplicate dentures for use as final impression trays has won first prizes at annual meetings of the Kentucky, Texas, and Ohio dental associations. He has been a frequent contributor to the *Journal of Prosthetic Dentistry*.

Dr. Wagner is a diplomate of the American Board of Prosthodontics, a member of Chi Chapter of OKU, and a fellow of the American College of Prosthodontists.



The December 1993 retirements of Roberta M. Hilderbrand, associate professor of periodontics, and Rolando A. DeCastro, professor of oral anatomy and director of dental art, were announced in a previous issue of the *Alumni Bulletin*.



### **Dr. Goodacre Accepts Deanship at Loma Linda**

CHARLES J. GOODACRE

In 1970, Loma Linda University, Loma Linda, Calif., honored its most outstanding dental student, Charles J. Goodacre, by presenting him with the university's President's Award.



Twenty-four years later, Loma Linda University once again singled out Charles Goodacre for excellence—this time, to appoint him as dean of the School of Dentistry. He assumed

his new post in mid-1994, leaving behind an impressive record of outstanding and dedicated service as a longtime faculty member at Indiana University.

Dr. Goodacre's ties to Loma Linda University extend back to 1967, when he was enrolled there as a first-year dental student. After earning his DDS degree in 1971, he enrolled in IU's three-year combined degree program in prosthodontics and dental materials, acquiring a double major and earning a master's degree in 1974.

He stayed on at IU after graduate school, teaching full-time for the next decade. Dr. Goodacre became a member of the part-time faculty in 1984, when he opened a full-time private practice in Zionsville. He resumed a full-time teaching position two years later when he was named to chair the Department of Prosthodontics, which was at that time a newly formed division composed of fixed and removable partial prosthodontics, complete denture, and maxillofacial prosthetics.

Dr. Goodacre chaired prosthodontics until 1993, when it combined with endodontics, operative dentistry, and dental materials to become the Department of Restorative Dentistry.

Long regarded as one of the finest clinicians in the country, Dr. Goodacre has held diplomate status on the American Board of Prosthodontics since 1977. He began a term as an examiner for the American Board of Prosthodontics in 1992. Dr. Goodacre currently serves as an editor of the *International Journal of Prosthodontics*.

He is the recipient of several outstanding teaching awards from IU's graduating dental classes, and a loyal supporter of IU's prosthodontic alumni group, the John F. Johnston Society for Advanced Partial Prosthodontics.



*Longtime dental school secretary M. Joan Justus retires from a department that brought an international flavor to her perspective on dentistry.*

"Just think how many postdoctoral students passed through the prosthodontic program during the 14 years you devoted to the department!" we remarked to Joan Justus shortly before her retirement last March from her position as principal secretary in the prosthodontic division of restorative dentistry.

"There were 66," she said without a trace of hesitation, indicating that she has counted these students with a precision used when people keep track of something highly valued.

Interacting with prosthodontic graduate students was among her favorite duties in a job that was rarely dull, sometimes frenzied, and always on a fast track. Well-known for attracting students from a worldwide applicant pool, the prosthodontic graduate program gave Joan an opportunity to get acquainted with interesting people from many countries and cultures. "My only regret was that their grad program was so full, there often wasn't time to get to know the students as well as I would have liked," she said.

Still, she succeeded in establishing some lasting ties. In 1990 Joan was delighted to be able to visit former student Dr. Adel El-Tannir (MSD'84) and his family in Cairo, Egypt. Dr. El-Tannir is the son of yet another prosthodontic alumnus, the late Dr. Mohamed D. El-Tannir (MSD'57).

Her stint in dentistry represented Joan's second career at IU. She had worked for seven years in the geology department on the Bloomington campus in the 1960s. Before that she spent a decade analyzing statistics for the L.S. Ayres research department in Indianapolis.

In between jobs with IU, Joan

## LET 'JUSTUS' BE DONE



*A job with worldwide ties. A total of 66 pins have been added to the world and U.S. maps hanging in the school's third-floor hallway since Joan Justus was hired in prosthodontics in 1980. The pins indicate locations of all the students who have graduated from IU's prosthodontic graduate program since its inception in the late '40s. The framed portrait is of legendary prosthodontist Dr. John F. Johnston, longtime chair of crown and bridge for whom IU's prosthodontic alumni society is named.*

worked for nine years at the Arizona State University Law School. She traveled to Europe after a divorce in 1979.

An illness led to her return to Franklin, Ind., near Indianapolis, where she was born and reared and still had family. "I started back at Ayres—this time in the fashion department—but I didn't enjoy it," she recalled.

Turning to the IU med center for employment opportunities, she found an opening in nursing and another in dentistry. She opted for dentistry, where she became primary secretary in the former Department of Prosthodontics, the largest division in the school. Her calm demeanor complemented the department's hectic pace. "Had I been a nervous person, I couldn't have handled it," she remarked. "I tried to take things with a grain of salt."

Aside from departmental responsibilities, Joan volunteered her time to

help dental school staff members create an organization to address needs of non-faculty employees. Her pioneering efforts included assisting in the drafting of a set of bylaws for the IUSD Non-Academic Staff Council. She was an active voice in the council and also represented the dental school at IUPUI staff council meetings.

Before her departure Joan was envisioning a future for herself that would contain "the usual stuff" of retirement, including a bit of gardening ("I've never had the luxury of trying it before") and some better-than-average travel plans, such as a month-long trip to Great Britain with friends.

Since retiring Joan Justus has cruised back to the dental school on occasion to help out part time. During the summer she lent a helping hand a few hours a week to staff members in the newly formed Department of Restorative Dentistry.



# ACHIEVEMENTS

## PUBLICATIONS

July 1, 1993—June 30, 1994

Academic titles of IUSD authors appear only at the first entry of their names. Names without titles indicate authors from institutions other than the IU School of Dentistry.

### Articles

#### Advances in Bioengineering

*The effects of orthodontic forces in the periodontal ligament of human mandibular molars*, 24: 269, 1993. By Jie Chen, assistant professor of orthodontics (Dentistry) and mechanical engineering (Engineering and Technology); Ken Chen; and W. Eugene Roberts, professor of orthodontics (Dentistry) and of physiology and biophysics (Medicine), and adjunct professor of mechanical engineering (Engineering and Technology)

*The effects of occlusion and orthodontic forces on the stresses around an endosseous implant*, 26: 431, 1993. By Jie Chen, Ken Chen, and W. Eugene Roberts

#### American Journal of Infection Control

*The numbers game: sample-size determination*, 21: 151, 1993. By Charles Edmiston; Adele Josephson; Jean Pottinger; Marie Ciaccio-Tsivitis; and Charles Palenik, professor of oral microbiology

#### American Journal of Dentistry

*Bond strength of resin cements to a hybrid composite*, 6(4): 195, 1993. By William Tate; Edward DeSchepper, associate professor of operative dentistry; and John Powers

*Bond strength of resin cements to microfilled composites*, 6(5): 235, 1993. By Edward DeSchepper, William Tate, and John Powers

*Pulp reactions to light-cured glass ionomer cements*, 7(1): 39, 1994. By Mariana Gaintantzopoulou (MSD'90 operative dentistry); George Willis, associate professor of operative dentistry; and Abdel Kafrawy, professor of dental diagnostic sciences

*The ability of biological indicators to detect sterilization failures*, 7(2): 95, 1994. By Chris Miller, professor of oral microbiology (Dentistry) and of microbiology and immunology (Medicine); and Margie Sheldrake, research associate in oral biology

#### American Journal of Orthodontics and Dentofacial Orthopedics

*The effects of load misalignment on tensile load testing of direct bonded orthodontic brackets—a finite element model*, 105(6): 543, 1994. By Thomas Katona, assistant professor of orthodontics (Dentistry) and mechanical engineering (Engineering and Technology); and B. Keith Moore, professor of dental materials

#### Bio-Medical Materials and Engineering

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*Titanium-porcelain system Part I: Oxidation kinetics of nitrided pure titanium, simulated to porcelain firing process*, 3(4): 185, 1993. By Yoshiki Oshida and Azza Hashem

#### CDS (Chicago Dental Society) Review

*Why you should help your patients stop using tobacco*, 87(4): 12, 1994. By Jennifer Klein, associate professor of dental hygiene (South Bend campus); Arden Christen, professor of preventive and community dentistry; and Joan Christen, research associate in oral biology

#### Compendium of Continuing Education in Dentistry

*A comparison of dentin permeability after bur and laser apicoectomies*, 14(10):1290, 1993. By Donald Arens, associate professor of endodontics; Guy Levy; and Ioana Rizoiu

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Mohssen Ghalichebaf (DDS'87); Christina DeBiase; and George Stookey, professor of preventive and community dentistry

#### Current Opinion in Periodontology

*Current epidemiologic consideration of periodontal disease*, 3-10, 1993. By E. Brady Hancock, professor of periodontics; and Donald Newell, assistant professor of periodontics

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*Intentional replantation: a viable alternative for selected cases*, 38(2): 325, 1994. By James Dryden and Donald Arens

#### Dental Materials

*Anodic polarization behavior and microstructure of a gallium-based alloy*, 9: 234, 1993. By Yoshiki Oshida and B. Keith Moore

#### Health Values (The Journal of Health Behavior, Education, & Promotion)

*Why is cigarette smoking so addicting? An overview of smoking as a chemical and process addiction*, 18(1): 17, 1994. By Arden Christen and Joan Christen

*Pharmacodynamic and pharmacokinetic properties of nicotine from cigarettes, Nicorette™ and Nicoderm™*, 18(1): 64, 1994. By James McDonald, professor of preventive and community dentistry; and Byron Olson, professor of preventive and community dentistry (Dentistry) and of biochemistry and molecular biology (Medicine)

#### Immunology and Infectious Diseases

*Enhancement of *Streptococcus sanguis* immunoglobulin A1 protease activity by *Streptococcus mutans**, 3: 309, 1993. By Richard Gregory, associate professor of oral microbiology (Dentistry) and of pathology and laboratory medicine (Medicine); and David Lloyd

#### The International Journal of Oral & Maxillofacial Implants

*Force-moment systems on single maxillary anterior implants: effects of incisal guidance, fixture orientation, and loss of bone support*, 8(5): 512, 1993. By Thomas Katona; Charles Goodacre, professor of prosthodontics;

David Brown, associate professor of prosthodontics; and W. Eugene Roberts

### **Journal Indiana Dental Association**

*A community-based program to facilitate dental care for senior citizens*, 72(4): 18, 1993. By Leonard Koerber, professor of instructional development and dental practice administration; and Sue Kelly, assistant director of clinical research, Oral Health Research Institute (OHRI)

*Denture labels affixed with light-cured versus self-cured resin*, 72(6): 26, 1993. By Larry Ryan, associate professor of preventive and community dentistry; John Keller (DDS'91); and Donald Rogers (DDS'92)

*A Look at Women's Contributions to Dentistry*, 72(6): 36, 1993. By Maynard Hine, professor emeritus of periodontics

*Awareness of child abuse: a dental responsibility*, 73(1): 10, 1994. By Mary Von Burg and Charles Hazelrigg, assistant professor of pediatric dentistry

### **Journal of Clinical Pediatric Dentistry**

*Oral-facial characteristics of circumscribed scleroderma: case report*, 17(4): 239, 1993. By Douglas Barton, associate professor of pediatric dentistry; and Hala Henderson, professor of pediatric dentistry

*The effect of sleep on conscious sedation*, 18(3): 211, 1994. By Brian Sanders, assistant professor of pediatric dentistry; Rosario Potter, professor emerita of oral facial genetics; and David Avery, professor of pediatric dentistry

### **Journal of Dentistry for Children**

*A statewide survey of dentists' knowledge of abuse*, 60(4&5): 321, 1993. By Mary Von Burg, Charles Hazelrigg, John Shoemaker, and Roberta Hibbard

*Properties related to strength and resistance to abrasion of VariGlass VLC, Fuji II L.C., Ketac-Silver, and Z-100 composite resin*, 61(1): 72, 1993. By Sompit Dhummarungrong, former visiting scientist in pediatric dentistry; B. Keith Moore; and David Avery

### **Journal of Forensic Sciences**

*Investigation of the 1987 Indianapolis airport Ramada Inn incident*, 39(3): 644, 1994. By Michael Clark; Dean Hawley; Joni McClain; John Pless; Donnell Marlin, assistant professor of dental diagnostic sciences; and S. Miles Standish, professor emeritus of oral pathology and dental diagnostic sciences

### **Journal of Gnathology**

*An engineering model of the Stuart pantograph*, 12(1): 25, 1993. By Thomas Katona; Lawrence Garetto, associate professor of orthodontics (Dentistry) and of physiology and biophysics (Medicine); and Raymond Drum

### **Journal of the Kansas Dental Association**

*Fluoride: safety issues*, 79(1): 32, 1994. By Yiming Li, associate scientist, OHRI (Dentistry) and adjunct associate professor of pharmacology and toxicology (Medicine)

*Current thoughts on prudent fluoride use*, 79(1): 27, 1994. By George Stookey

### **Journal of the Massachusetts Dental Society**

*Using ultrasonic cleaners to reduce exposure to bloodborne disease*, 42(3): 121, 1993. By Charles Palenik

### **Journal of Materials Science: Materials in Medicine**

*Effects of shot-peening on surface contact angles of biomaterials*, 4: 443, 1993. By Yoshiki Oshida, Rohit Sachdeva, Shuichi Miyazaki, and James Daly

### **Journal of Oral and Maxillofacial Surgery**

*Retromolar trigone mass*, 51(9): 1024, 1993. By Gregory Lutcavage; Siegfried Schaberg; Deborah Fulbright; and Charles Nelson, associate professor of oral and maxillofacial surgery (Dentistry) and of plastic surgery (Medicine)

### **Journal of Periodontology**

*Comparative SEM study on the effect of acid etching with tetracycline HCl or citric acid on instrumented periodontally involved human root surfaces*, 64(8): 689, 1993. By Thomas Lafferty; Marlin Gher; and Jonathan Gray, clinical assistant professor of periodontics

*A histomorphometric study on the healing of class III furcations utilizing bone labelling in beagle dogs*, 65(1): 84, 1994. By Cecil White (MSD'90 periodontics); E. Brady Hancock; Lawrence Garetto; and Abdel Kafrawy

### **Journal of Prosthetic Dentistry**

*Clear acrylic resin T-bar used in denture identification*, 70(2): 189, 1993. By Larry Ryan; John Keller; Donald Rogers; and Lee Schaeffer, dental laboratory technologist in restorative dentistry

*Recent graduates' and current dental students' evaluation of their prosthodontic curriculum*, 70(4): 361, 1993. By Steven Haug, associate professor of prosthodontics; David Brown; Charles Goodacre; and Benito Cerimele

### **Life Sciences**

*The mouse paw withdrawal assay: a method for determining the effect of calcitonin gene-related peptide on cutaneous heat nociceptive latency time*, 53(5): 397, 1993. By Mark Saxen, assistant professor of dental diagnostic sciences; Sandra Welch; and William Dewey

### **Medical Engineering and Physics**

*Mechanical simulation of the human mandible with and without an endosseous implant*, 16: 53, 1994. By Jie Chen; Xianneng Lu; Nasser Paydar, associate professor of mechanical engineering (Engineering and Technology) and adjunct associate professor of orthodontics (Dentistry); Hasan Akay; and W. Eugene Roberts

## Modern Medicine

*Smoking cessation by women and older persons: results from the transdermal nicotine study group*, 62(suppl 1): 34, 1994. By Lawrence Repsher and the Transdermal Nicotine Study Group, including Arden Christen; Bradley Beiswanger, professor of preventive and community dentistry; Melissa Mau, associate director of clinical research, OHRI; and Cheryl Walker, research data manager, OHRI

## Operative Dentistry

*Class 5 composite resin restorations: margin configurations and the distance from the CEJ*, 18(6): 246, 1993. By Lisa Hall, assistant professor of operative dentistry; Michael Cochran, professor of operative dentistry; and Marjorie Swartz, professor emerita of dental materials

## Oral Surgery Oral Medicine Oral Pathology

*Information yield from a hand-held dental x-ray unit*, 76(3): 381, 1993. By Margot Van Dis, associate professor of dental diagnostic sciences; Dale Miles, professor of dental diagnostic sciences; Edwin Parks, assistant professor of dental diagnostic sciences; and former IU faculty member Thomas Razmus

*Assessment of the knowledge of graduating American dental students about the panoramic image*, 76(3): 397, 1993. By Thomas Razmus; Gail Williamson, associate professor of dental diagnostic sciences; and Margot Van Dis

*Effects of filtration, collimation, and target-receptor distance on artificial approximal enamel lesion detection with the use of RadioVisioGraphy*, 77(4): 419, 1994. By Edwin Parks; Dale Miles; Margot Van Dis; Gail Williamson; Thomas Razmus; and the late Steven Bricker, professor of dental diagnostic sciences

## Pediatric Dentistry

*Oral management of a patient with a plasminogen activator inhibitor (PAI-1) deficiency: case report*, 16(2): 133, 1994. By Leslie Tanimura (MSD'93 pediatric dentistry); James Weddell, associate professor of pediatric dentistry; Carol McKown, assistant professor of pediatric dentistry; Amy Shapiro; and Janet Mulherin (ASDH'88)

## Preventive Medicine

*Cholesterol changes in smoking cessation using the transdermal nicotine system*, 23(2): 190, 1994. By Sharon Allen, Dorothy Hatsukami, Jane Gorsline, and the Transdermal Nicotine Study Group, including Arden Christen, Bradley Beiswanger, Melissa Mau, and Cheryl Walker

## QDT (Quintessence of Dental Technology)

*Method of evaluating the antimicrobial abilities of disinfectant-containing gypsum products*, 17: 172, 1994. By Katrina Huizing (DDS'93); Charles Palenik, James Setcos (DDS'88); Margie Sheldrake; and Chris Miller

## Abstracts

### Great Lakes Electron Microscopy Conference Program and Abstracts

*Visualization and characterization of Streptococcus mutans fimbriae by negative and immunogold bead staining in the TEM*, October 1993. By Richard Gregory; Ned Warner; Linda Gfell, senior research assistant in oral biology; and Margherita Fontana, PhD candidate in dental science

### Journal of Dental Education

*A Pilot Study to Compare Videocamera vs. Mirror and Explorer Examination*, 58(2): 126, 1994. By Margot Van Dis and Dale Miles

*Assessment of Panoramic Image Knowledge of Graduating Dental Hygiene Students*, 58(2): 134, 1994. By Gail Williamson, Edwin Parks, and Thomas Razmus

*Student and Faculty Perceptions of Competence in Oral Diagnosis and Treatment Planning*, 58(2): 151, 1994. By Margot Van Dis and Edwin Parks

### Journal of Dental Research (Volume 73 Special Issue, March 1994)

*Sterilizing the inside of metal air/water syringe tips*, page 111, by Tamara Watkins (DDS Class of '95), Margie Sheldrake, Chris Miller, and Charles Palenik

*Effect of surface roughness on shear bond strength to dentin*, page 132, by Mark Winkler; B. Keith Moore; and Barbara Rhodes, senior research technologist in restorative dentistry

*Influence of light irradiation of dentin primer on dentin-resin bond*, page 132, by Masashi Miyazaki, visiting scientist in dental materials; Kou Hinoura, former visiting scientist in dental materials; Hideo Onose; and B. Keith Moore

*Repair bond strength of type II light-cured glass ionomer cements*, page 134, by Richard Davis, former U.S. Air Force fellow in dental materials; Tanya Woody (certificate '93, advanced education in general dentistry); and B. Keith Moore

*Glass ionomer attachment of fractured anterior tooth fragments*, page 134, by Anthony Minutillo, master's degree candidate in pediatric dentistry; Jeffrey Dean, assistant professor of pediatric dentistry; and B. Keith Moore

*Experimental development of a chitosan bonded  $\beta$ -tricalcium phosphate bone filling paste*, page 138, by Michio Ito, Toshio Yamagishi, Hiroshi Yagasaki, Azza Hashem, and Yoshiki Oshida

*Characterization of Streptococcus mutans fimbriae and antibody response*, page 153, by Richard Gregory, Ned Warner, Linda Gfell, and Margherita Fontana

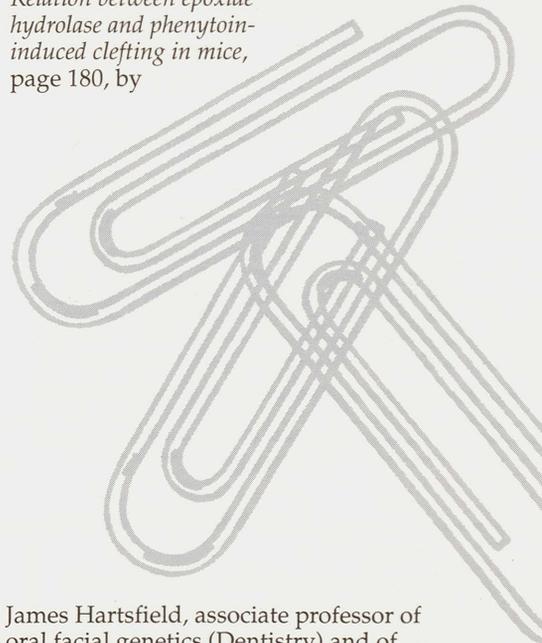
*Smokeless tobacco effects on IgA synthesis from lymphocyte cultures*, page 153, by Ned Warner, Linda Gfell, and Richard Gregory

*Epithelial secretory component, lactoferrin and lysozyme synthesis: nicotine and cotinine*, page 154, by Linda Gfell and Richard Gregory

*Nutritional potential of Streptococcus sanguis immunoglobulin A1 protease*, page 154, by Michelle Wittler (DDS Class of '95), Linda Gfell, and Richard Gregory

*Effect of hypergravity on mandibular condyle growth and osteoblast differentiation*, page 174, by Luis Martines, master's degree candidate in orthodontics; Lawrence Garetto; and W. Eugene Roberts

*Relation between epoxide hydrolase and phenytoin-induced clefting in mice*, page 180, by



James Hartsfield, associate professor of oral facial genetics (Dentistry) and of medical and molecular genetics (Medicine)

*Laboratory testing of type II light-cured glass ionomers as pit/fissure sealants*, page 184, by Nels Ewoldsen (DDS'78, MSD'94 dental materials), B. Keith Moore, and Mark Winkler

*Histomorphometric and biomechanical analysis of endosseous implant healing*, page 202, by Shelley Tardy (MSD'92 orthodontics), Lawrence Garetto, and W. Eugene Roberts

The local Shwartzman phenomenon and human dentin permeability to endotoxin, page 215, by Andréa Ferreira Zandoná (MSD'94 operative dentistry), George Willis, and Abdel Kafrawy

Effect of material properties on root stress in post-restored teeth, page 218, by John Cailleateau and Edward DeSchepper

Regional differences in fibroblastic colony formation in rat bone marrow, page 242, by Richard Simcox (DDS Class of '96) and Janet Hock, adjunct professor of periodontics

Image quality and diagnostic utility of filtered RadioVisioGraphy images, page 268, by Edwin Parks, Dale Miles, Gail Williamson, and Margot Van Dis

Characterization of the immune response to fluoride resistant *Streptococcus mutans*, page 317, by Lana Stoll (DDS Class of '95), Linda Gfell, and Richard Gregory

Factors influencing dentin bond of a tri-cured type II glass ionomer, page 329, by Kou Hinoura, H. Iman, Hideo Onose, and B. Keith Moore

Finite element analysis of the regional mechanical environment surrounding rigid bone-implant interface, page 330, by Jie Chen, W. Eugene Roberts, and Lawrence Garetto

Enamel lesion characterization by confocal and microradiographic analyses, page 337, by Kichuel Park, professor of preventive and community dentistry; Taein Kim, master's degree candidate in preventive dentistry; Chong-Chul Kim, former visiting scientist in pediatric dentistry and oral health research; Timothy Noblitt, research technologist, OHRI; Andrew Beiswanger, research technician, OHRI; and George Stookey

Fluoridated skim milk increases remineralization of incipient carious lesion, page 338, by Kichuel Park, Chong-Chul Kim, David Avery, and George Stookey

An *in vitro* microbial model for studying secondary caries formation, page 339, by Margherita Fontana; Ann Dunipace, associate scientist, OHRI; Richard Gregory; Timothy Noblitt; Yiming Li; and George Stookey

Presence of *Streptococcus mutans* in secondary caries, page 339, by Carlos Gonzalez-Cabezas, PhD candidate in dental science; Yiming Li; Timothy Noblitt; Richard Gregory; Abdel Kafrawy; and George Stookey

Localization of GroEl in heat shocked log-phase *Streptococcus mutans*, page 349, by Margie Sheldrake, Linda Gfell, and Richard Gregory

Nicotine-induced changes in human bone cells and mouse fibroblasts, page 357, Jeanine Green (DDS Class of '96), James McDonald, Timothy Noblitt, Yiming Li, and Byron Olson

Effects of collimation on scatter radiation: a densitometric study, page 365, by Edwin Parks, Derrick Johnston (DDS'94), Margot Van Dis, and Dale Miles

The wear characteristics of three new dental porcelains, page 369, by Christine Bishop (MSD candidate in prosthodontics), Charles Goodacre, B. Keith Moore, and Mark Winkler

Influence on dental caries of enamel hypoplasia and colonization of *mutans streptococci* in rural Chinese children 3 to 5 years old, page 385, by Yiming Li and Juan Navia

Oxidation kinetics of nitrided pure titanium during porcelain firing process, page 408, Yoshiki Oshida and Azza Hashem

Inhibition of plaque regrowth by dentifrices containing zinc lactate, page 424, by P. Doyle; Melissa Mau; Bradley Beiswanger; E. Zak; I. Barton; S. McKeown; M. Perlich; and M. Leigh

Effectiveness of three sterilization methods on spore soiled dental casts, page 427, by Judith Waskow (DDS'94), Charles Palenik, James Setcos, and Chris Miller

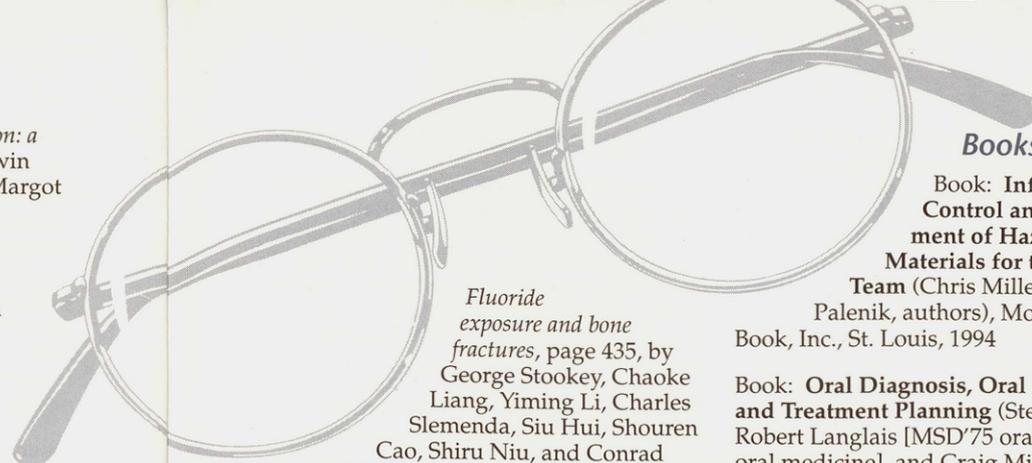
Antimicrobial activities of dental impression materials which contain disinfectant, page 428, by Denise Flanagan (DDS'94), Charles Palenik, James Setcos, and Chris Miller

Antigingivitis effect of a stannous fluoride dentifrice, page 433, by M. Perlich; Bradley Beiswanger; William Eichhold, assistant scientist, OHRI; Melissa Mau; Richard Jackson, research associate, OHRI; B. Bollmer; L. Bacca; and A. Lanzalaco

Genotoxicity of chronic fluoride in medically compromised rats: SCE studies, page 435, by Wu Zhang, dental research technologist, OHRI; Marie Wilson, research technician, OHRI; Yiming Li; and Ann Dunipace

Prevalence of fluorosis in adults, page 435, by Richard Jackson; Sue Kelly; Barry Katz, associate professor of medicine (Medicine) and of preventive and community dentistry (Dentistry); James Hull (DDS'77); and George Stookey

Effects of chronic fluoride exposure in aging animals, page 435, by Ann Dunipace; Wu Zhang; Linda Miller, clinical research technician, OHRI; former IUSD employee Tammy Oswald; Stephanie Williams, animal research technician, OHRI; former IUSD employee Meiyang Wu; and Janice Warrick, assistant director, bioresearch facility, OHRI



Fluoride exposure and bone fractures, page 435, by George Stookey, Chaoke Liang, Yiming Li, Charles Slemenda, Siu Hui, Shouren Cao, Shiru Niu, and Conrad Johnston

Fluoride exposure and SCE frequency in human lymphocytes, page 436, by Yiming Li, Chaoke Liang; Barry Katz, Shouren Cao, Shiru Niu, and George Stookey

Pharmacologic effect of chronic fluoride exposure on diabetic rats, page 436, by Ann Dunipace; Marie Wilson; Cynthia Wooldridge, animal research technician, OHRI; Wu Zhang; Linda Miller; Meiyang Wu; and Janice Warrick

High doses of fluoride in adults, page 437, by Richard Jackson, Sue Kelly, Barry Katz, Timothy Noblitt, Sally Farley, and David Baylink

#### Microscopy Research and Technique

Mobilization into inflammatory tissue of elements from a glass ionomer implant, 27(4): 354, 1994. By Jean Schoknecht, supervisor, scanning electron microscope facility; and Abdel Kafrawy

#### Pediatric Dentistry

IgA antibodies to *Streptococcus mutans* in caries resistant/susceptible children, 16(2): 163, 1994. By Paul Rose (MSD'93 pediatric dentistry), Richard Gregory, Linda Gfell, and former IU faculty member Christopher Hughes

Program and Abstracts for the Annual Meeting of the Indiana Branch of the American Society for Microbiology, April 1994

Systemic application of smokeless tobacco: effects on mucosal immunity, page 29, by Leslie Leatherman-Johnston, Linda Gfell, and Richard Gregory

Detection of *Streptococcus mutans* in secondary caries lesions using immunofluorescence and laser scanning confocal microscopy, page 31, by Carlos Gonzalez-Cabezas, Yiming Li, Timothy Noblitt, Richard Gregory, Abdel Kafrawy, and George Stookey

#### Books/Chapters

Book: **Infection Control and Management of Hazardous Materials for the Dental Team** (Chris Miller and Charles Palenik, authors), Mosby—Year Book, Inc., St. Louis, 1994

Book: **Oral Diagnosis, Oral Medicine, and Treatment Planning** (Steven Bricker, Robert Langlais [MSD'75 oral diagnosis-oral medicine], and Craig Miller, authors), 2nd edition, Lea & Febiger, Philadelphia, 1994

IUSD alumni of the oral diagnosis-oral medicine graduate program and IU faculty contributing to this book include Bill Baker (MSD'63), James Cottone (MS'77), Abdel Kafrawy, Janet Karp (MS'81), P. Thomas McDavid (MS'75), Monique Michaud (MSD'76), Dale Miles, and Margot Van Dis.

Book: **Elements of Dental Materials for Dental Hygienists and Dental Assistants** (the late Ralph Phillips, research professor of dental materials, and B. Keith Moore, authors, with contributions by Marjorie Swartz), 5th edition, W.B. Saunders Company, Philadelphia, 1994

Book: **An Atlas of Dental Radiographic Anatomy** (Myron Kasle, Howard Riley Raper professor emeritus of radiology, author), 4th edition, W. B. Saunders Company, Philadelphia, 1994

Book: **Dentistry for the Child and Adolescent** (Ralph McDonald and David Avery, editors), 6th edition, Mosby—Year Book, Inc., St. Louis, 1994

Drs. McDonald and Avery also were authors of 12 chapters in this text, among them *Dental Caries in the Child and Adolescent* (co-written with George Stookey), page 216; *Gingivitis and Periodontal Disease* (co-written with James Weddell), page 455;

and *Management of Trauma to the Teeth and Supporting Tissues*, page 503, *Managing Space Problems*, page 707, and *Diagnosis and Correction of Minor Irregularities in the Developing Dentition*, page 744 (all co-written with David Hennon, professor of pediatric dentistry and orthodontics).

Other chapters in this text written by IUSD faculty and alumni include:

*Child Abuse and Neglect*, page 24, by Roberta Hibbard and Brian Sanders

*Psychologic Management of Children's Behavior*, page 32, by Gerald Wright (MSD'70 pediatric dentistry)

*Radiographic Techniques*, page 62, by Steven Bricker and Myron Kasle

*Clinical Genetics for the Dental Practitioner*, page 82, by David Bixler, professor emeritus of oral facial genetics (Dentistry) and of medical and molecular genetics (Medicine)

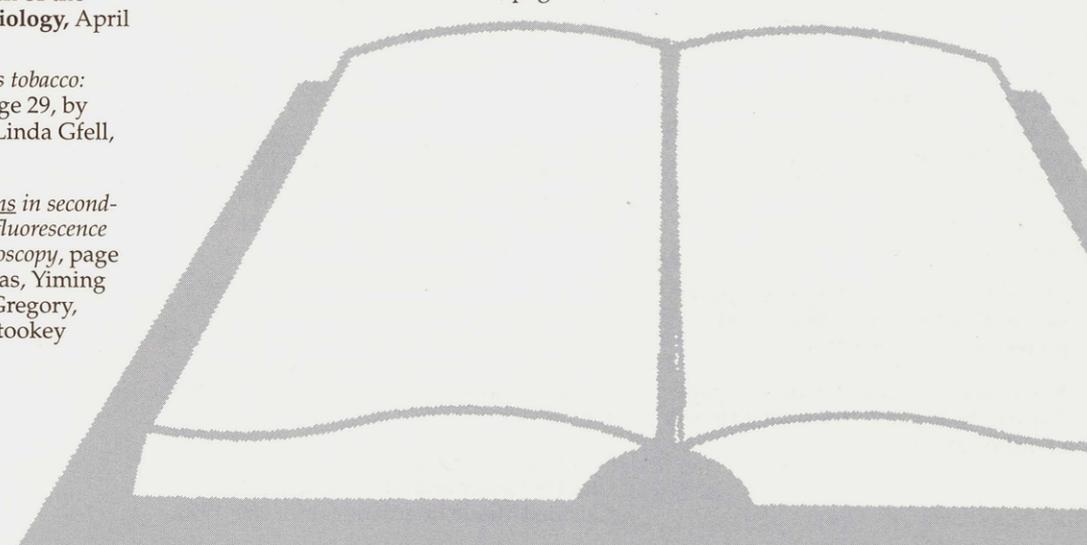
*Tumors of the Oral Soft Tissues and Cysts and Tumors of Bone*, page 159, by John McDonald (DDS'73, MS'78 oral pathology)

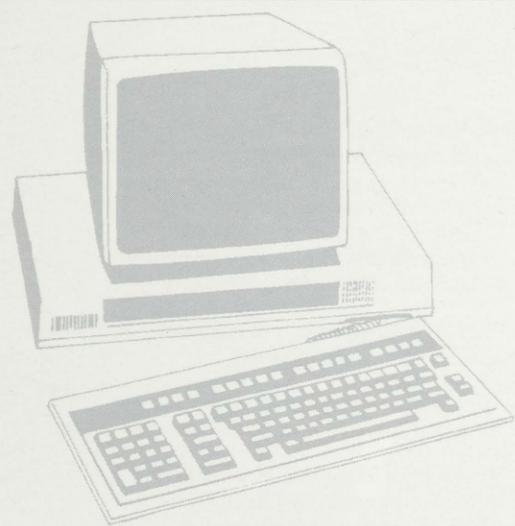
*Mechanical and Chemotherapeutic Home Oral Hygiene*, page 256, by Jeffrey Dean and Christopher Hughes

*Nutritional Considerations for the Pediatric Dental Patient*, page 283, by James McDonald

*Hospital Dental Services for Children and the Use of General Anesthesia*, page 335, by James Weddell and James Jones, professor of dental education (Fort Wayne campus) and adjunct professor of pediatric dentistry (Dentistry)

*Dental Materials*, page 358, by B. Keith Moore and Ralph Phillips





*Pit and Fissure Sealants*, page 387, by Hala Henderson and James Setcos

*Prosthodontic Treatment of the Adolescent Patient*, page 564, by Charles Goodacre and David Brown

*Dental Problems of the Disabled Child*, page 592, by James Weddell, Carol McKown, Brian Sanders, and James Jones

*Cephalometrics and Facial Esthetics: the Key to Complete Treatment Planning*, page 677, by John Krull, assistant professor of pediatric dentistry; and David Bussard, clinical assistant professor of oral and maxillofacial surgery

*Multidisciplinary Team Approach to Cleft Lip and Palate Management*, page 790, by James Jones; Charles Nelson; A. Michael Sadove, professor of plastic surgery (Medicine) and of oral and maxillofacial surgery (Dentistry); and David Hennon

*Community Oral Health*, page 862, by Charles Gish, professor emeritus of pediatric dentistry; and Charles Smith, associate professor of preventive and community dentistry

Book: **Decision Making in Dental Treatment Planning** (Walter Hall, W. Eugene Roberts, and Eugene LaBarre, editors), Mosby—Year Book, Inc., St. Louis, 1994

Dr. Roberts also wrote two articles for this text: *Management of Edentulous Space in the Lower Posterior Segment*, page 146; and *Limited Orthodontics in Adults*, page 142

Other chapters written for this text by IUSD faculty include:

*Molar Uprighting/Creating Space*, page 144, by Gordon Ar buckle, assistant professor of orthodontics

*Nonrestorable Space in the Maxilla*, page 150, by David Clark, assistant professor of orthodontics

*Flared Maxillary Incisors*, page 152, by James Baldwin, associate professor of orthodontics; and Gordon Ar buckle

*Orthodontic Crown Lengthening of a Fractured Tooth*, page 154, by William Hohl, associate professor of orthodontics

Chapter: *Bone Physiology, Metabolism, and Biomechanics in Orthodontic Practice*, by W. Eugene Roberts. In **Orthodontics: Current Principles and Techniques** (Thomas Graber and Robert Vanarsdall, editors), 2nd edition, Mosby—Year Book, Inc., St. Louis, 1994, page 193

Chapter: *Fundamental Principles of Bone Physiology, Metabolism and Loading*, by W. Eugene Roberts. In **Osseointegration in Oral Rehabilitation** (Ignace Naert, Daniel van Steenberghe, and Philip Worthington, editors), Quintessence Publishing Co., London/Chicago, 1993, page 157

Chapter: *Physician and Dentist Interventions for Smoking Cessation*, by Stuart Cohen, George Stookey, and Sue Kelly. In **Tobacco and the Clinician: Interventions for Medical and Dental Practice**, a monograph of the National Cancer Institute, National Institutes of Health, 1994

### Monograph

**A Smoking Cessation Program for the Dental Office**, 4th edition, Indiana University, 1994. By Arden Christen; James McDonald; Jennifer Klein; Joan Christen; and Christianne Guba, associate professor of preventive and community dentistry

### Dissertation

*Comparison of the Heat Lability of Control and Phenytoin-induced Microsomal Xenobiotic Epoxide Hydrolase Enzyme Activity and the cDNA Coding Sequences in A/J and C57BL/6J Female Mice*, submitted by James Hartsfield to the University of South Florida's Department of Anatomy in partial fulfillment of requirements for the degree of Doctor of Philosophy, received November 1993

### Column

Chris Miller, infection control contributing editor for RDH (Registered Dental Hygienist), six columns for Volume 13, 1993; and six columns for Volume 14, 1994

### Commentaries

"Commentary to the COMMIT Dental Model: Tobacco Control Practices and Attitudes," by Arden Christen. In *Journal of the American Dental Association* 124(9): 106, 1993

"On Fluoride and Bone Strength," by Charles Turner and Ann Dunipace. In *Calcified Tissue International* 53: 289, 1993

### Guest Editors

**The Dental Clinics of North America**, theme issue on advances in dental imaging, 37(4), 1993. Edited by Dale Miles and Margot Van Dis. Drs. Miles and Van Dis also were authors of one of the articles, *Implant radiology*, page 645; and Dr. Miles was author of another article, *Imaging using solid-state detectors*, page 531.

**The Dental Clinics of North America**, theme issue on the clinical approach to radiologic diagnosis, 38(1), 1994. Edited by Dale Miles and Margot Van Dis. Drs. Van Dis and Miles also were authors of one of the articles, *Disorders of the maxillary sinus*, page 155.

**Journal Indiana Dental Association**, theme issue on operative dentistry, 72(5), 1993. Edited by Michael Cochran. Includes his editorial, *The times...they are a-changin'*, page 7.

### External Newsletter

**Dental Asepsis Review**, edited and written by Charles Palenik and Chris Miller. Six issues published under Volume 14, 1993, and six under Volume 15, 1994

### PROMOTIONS/TENURE

**LAWRENCE P. GARETTO**, promoted to associate professor of orthodontics (School of Dentistry) and associate professor of physiology and biophysics (School of Medicine); and tenured

**RICHARD L. GREGORY**, tenured

**CHRISTIANNE J. GUBA**, promoted to associate professor of preventive and community dentistry; and tenured

**STEVEN P. HAUG**, promoted to associate professor of prosthodontics; and tenured

**WILLIAM F. HOHLT**, promoted to associate professor of orthodontics; and tenured

**SARA A. HOOK**, promoted to librarian

**DALE A. MILES**, promoted to professor of dental diagnostic sciences; and tenured

### HONORS

**DONALD E. ARENS**  
Edgar D. Coolidge Award, American Association of Endodontists

Honorary membership, Alpha Omega International Dental Fraternity

**DAVID R. AVERY**  
Special Award for Outstanding Service and Dedication as Chair of Pediatric Dentistry for 17 Years, presented by Indiana University Pediatric Dentistry Alumni

**ANDREW J. BEISWANGER**  
IUSD Staff Award for Research Excellence, supported by the John O. Butler Company

**STEVEN L. BRICKER**  
1994's Distinguished Faculty Member, Organization of Teachers of Oral Diagnosis

**VAROUJAN A. CHALIAN (emeritus)**  
Recognition Award, First International Congress on Maxillofacial Prosthetics

**JEFFREY A. DEAN**  
Elected to Theta Theta Chapter, Omicron Kappa Upsilon dental honor society

**PAMELA J. ELLIOTT**  
Outstanding Leadership Award, Indiana Coalition of Blacks in Higher Education

**RICHARD L. GREGORY**  
1994 Distinguished Faculty Award for Research, IUSD Alumni Association

**KAY HINSHAW**  
Special Contribution Award, U.S. Department of Veteran Affairs

**LOUISE M. JUDD**  
Community Service Award, Indiana Dental Hygienists' Association

**SUE A. KELLY**  
IUSD Staff Award for Research Excellence

**DONNELL C. MARLIN**  
Elected to Theta Theta Chapter, OKU

**EDWIN T. PARKS**  
Howard R. Raper Award for Excellence, presented by IUSD and the American Association of Oral and Maxillofacial Radiology

**PHILIP C. RAKE**  
Elected to Theta Theta Chapter, OKU

1993 Distinguished Faculty Award for Teaching, IUSD Alumni Association

**MARY LEESA REHMEL**  
Elected to Theta Chapter, Sigma Phi Alpha dental hygiene honor society

**W. EUGENE ROBERTS**  
1993 Distinguished Faculty Award for Research, IUSD Alumni Association

Doctor of Honorary Causes, bestowed by the University of Lille, France, and the French government

**GEORGE K. STOOKEY**  
The Maynard K. Hine Award, highest award of the Indiana Dental Association

**MARGOT L. VAN DIS**  
1994 Distinguished Faculty Award for Teaching, IUSD Alumni Association

**Indiana University DDS Class of 1994's Banquet Awards:**  
Best Part-time Instructor:  
**DAVID E. BAILEY**, restorative dentistry

Outstanding Service:  
**OFFICE OF CLINICAL AFFAIRS** and  
**OFFICE OF STUDENT AFFAIRS**

Outstanding Service:  
**PHILIP C. RAKE**, restorative dentistry

Outstanding Laboratory Instructor:  
**GLENN E. RICHARD**, restorative dentistry

Outstanding Clinical Instructor:  
**GLENN E. RICHARD**

Best Lecture Series:  
**CHARLES E. TOMICH**, stomatology (course subject: oral pathology)

### PRESIDENTS

**GORDON R. ARBUCKLE**  
Midwest Component, Edward H. Angle Society

**DAVID B. CLARK**  
Indiana University Orthodontic Alumni Association

**JEFFREY A. DEAN**  
Indiana Section, American Association for Dental Research

**H. WILLIAM GILMORE**  
Indiana University Alumni Association

**RICHARD L. GREGORY**  
Indiana Branch, American Society for Microbiology (and chair of 1993-94 annual meeting)

**HALA Z. HENDERSON**  
College of Diplomates, American Board of Pediatric Dentistry

**SUTEERA T. HOVIJITRA**  
John F. Johnston Society

**W. EUGENE ROBERTS**  
Indianapolis Medical Chapter, CCGVN, an international study group based in Rouen, France

**JACK E. SCHAAF**  
Theta Theta Chapter, OKU

**DON-JOHN SUMMERLIN**  
Little Red Door Cancer Agency

### FELLOWS

**CARL J. ANDRES**  
Academy of Prosthodontics, Orlando, Florida

### CHAIRS

**DONALD E. ARENS**  
Ad Hoc Committee for Research and Education Strategic Planning Committee, American Association of Endodontists

**EDWIN T. PARKS**  
Section on Oral and Maxillofacial Radiology, American Association of Dental Schools

**GAIL F. WILLIAMSON**  
Subcommittee on Allied Health Radiography, American Academy of Oral and Maxillofacial Radiology (3-year appointment)

### DEGREES

**JAMES K. HARTSFIELD, JR.**  
Graduated with the Doctor of Philosophy degree in anatomy, University of South Florida

**SARA A. HOOK**  
Graduated cum laude with the Doctor of Jurisprudence degree, Indiana University School of Law (Indianapolis); and admitted to the State Bar of Indiana



# CLASSES OF 1994



## Certificates in Dental Assisting

### Fort Wayne

April L. Byer  
Rebecca A. Fulkerson  
Holly M. Gamester  
Angela S. Hoffman  
Peggy K. Lothamer  
Bethany L. Malone  
Marie A. Marlow  
Angela S. Martin  
Kimberly A. McIntosh  
Angela K. Nichols  
Jennifer K. Smith  
Deborah Endicott Stuart  
Stephanie L. Teeter

### Indianapolis

Carreen Elizabeth Antle  
Dee Ann Brittain  
Carmen K. Clemons  
Nahida Elsharaiha  
Patricia Denise Friddle  
Jennifer Krista Goodwin  
Terri Jean Hanson  
Mellissa Dianne Laymance  
Monica Rae McKim  
Kathy Kay Plunkett  
Lorrie Ann Rogers  
Michelle Nicole Stroup  
Tracey Ranae Walker  
Jennifer Ann Weber

### Northwest

Amber Cook  
Heather Doroff  
Tara Goodwin  
Skyeler Hardy  
Jennifer Jewett  
Donna Johnson  
Kina Knoch  
Carla Locasto  
Melinda Riggs

### South Bend

Melissa E. Bemiller  
Melissa K. DeBroka  
Jennifer L. Dieter  
Catherine Elaine Ellis  
Beth Anne Foulks  
Alice Kay Glantz  
Staci Hendricks  
Rebecca M. Howard  
Melissa L. Klapp  
Alla Kostylev  
Emily A. Kuritz  
April J. Magdalinski  
Deborah L. Nowacki

Theresa S. Pride  
Rachel L. Thomas  
Tamera R. Tice  
Susan C. Wallace  
April J. Wiedeman

## Associate of Science Degrees in Dental Laboratory Technology

### Fort Wayne

Elizabeth R. Acker  
Belinda A. Arguellez  
Eric J. Federspiel  
Angela C. Hamilton  
James P. Hein  
Andrea K. Henson  
Pamela J. Hughes  
Bonnie A. Langohr  
Colleen R. Painter  
Dawn D. Peters  
Carol A. Sibole  
Lynn C. Sowards  
Susan O. Stewart

## Associate of Science Degrees in Dental Hygiene

### Fort Wayne

Gail A. Bussard  
Shelline Y. Cunningham  
Christie M. Eash  
Casey L. Gordon  
Sherry L. Hall  
Jane E. Heminger  
Angela P. Horton  
Tonya S. Johnson  
Melody L. Kern  
Kari L. Klein  
Amy S. Richards  
Wendi D. Street  
Jill A. Waters  
Robin P. Zynda

### Indianapolis

Lori Suzanne Aspaas  
Kelley Elizabeth Beckett  
Traci Lynn Blue  
Kassandra C. Bohm  
Terry J. Carnes  
Anna M. Cochran  
Angela Marie Creighton  
Michele René Cross  
Jennifer Ann Davis  
Mickeela Dawn Fair  
Vicki Ann Fasnacht

Kelli Ann Ford  
Jennifer L. Fouts  
Rhonda Christine Fuller  
Michele Marie Geno  
Nancy Graves Gobel  
Laura Kay Halsell  
Valerie Sue Helms  
Valerie Leigh Hillenburg  
Yvette J. Intermill  
Pamela L. Jones  
Amy Arlene Kinslow  
Donna M. Knotts  
Jennifer Lynn Lodovisi  
Cheryl Anne Love  
Amy Kay Lykins  
Cynthia A. Manifold  
Sandra S. McIlrath  
Anita D. Miles  
Penny Lee Parkhill  
Diane C. Phifer  
Amy L. Price  
Christina Sue Reichel  
Pamela Kay Shaw  
Lorinda Sue Skinner  
Carol Susan Spencer  
Lori Kay Stuckwisch  
Sandra L. Swift  
Tammy Sue Tisher  
Jane Ann Weinzapfel  
Charlotte M. Williams  
Loretta L. Wood  
Stacie H. Wroblewski  
Lisa D. Wylie  
Alyssa Faith Yadon

### Northwest

Suzie Adams  
Tammy Frame  
Laurie Gibson  
Jean Glad  
Dana Grubbe  
Jodi Farris  
Bridget Hodgeman  
Lori Laco  
Shelley Merrell  
Jennifer Palka  
Nancy Perez  
Jennifer Piechowiak  
Melissa Rich  
Michelle Rossi  
Candice Smith  
Peggy Wolf  
Mary Stoudt  
Shelly Utpatel  
Elaina Vraniskoski  
Karen Walker

### South Bend

Patricia Ann Akers  
Crystal Renee Back  
Tonya Renee Beard  
Valerie Anne Blosser

Cynthia Denise Brouwer  
Cynthia Nanette Calisto  
Beth Deann Chidister  
Kathleen Ann Clark  
Meri Beth Cornforth  
Jyl Lynn Dierks  
Patricia Ann Evans  
Margaret Marie Forrest  
Bethany Ann Franks  
Leanie L. Gaban  
Jennifer Michelle Geist  
Tammy Lynn Holland  
Lorain Denise Rice  
Brenda Parsons Roth  
Carol Lee Snider  
Joy Lynn Summitt  
Denise Meerdo Thomas  
Julie Ann Wozniak

## Doctor of Dental Surgery Degrees

Joyce Gonzalvo Ablog  
William Stanley Anderson  
Theresa Cruz Asper  
Michael Edward Bajza  
Kathleen Judith Beache  
Angela Renee Becker  
Satbir S. Brar  
Carla Kay Brink  
Timothy Jay Bussick  
James Todd Campi  
Piper C. Clark  
Timothy Eric Colby  
Cynthia S. Ditslear  
Roderick R. Dowden  
T.A. Duncan  
William Joseph Enoka  
Richard A. Evanseck  
Lisa Stewart Fahle  
Steven Lee Farnsley  
Scott James Findley  
William Bruce Fink  
Denise Eileen Fisher  
Denise A. Flanagan  
Carl Chosei Futenna  
Angie S. Gardner  
Diane Christine Garrison  
Kurt Robert Gossweiler  
Randall Lane Griffin  
Stephen Scott Hall  
Donald Mason Hanson  
Neslihan Ertem Hargett  
Andrew Thomas Hawks  
Cynthia Lee Hovey  
Sarkis Cengiz Isikbay  
Douglas Alan Jansen  
Kelly Andrew Jastremski  
Derrick Allen Johnston  
Richard Thomas Jones  
Kenn Kaneshiro  
Anthony Richard Klein

Aaron J. Kroemer  
 Jan Stefan Labeda  
 Lisa Marie Lindsey  
 Shawn Ray Long  
 Sigrid Elaine Madding  
 George Campbell Mansfield IV  
 Clifford Lee Martin  
 Iris Corina Francien McNicholl  
 Michael Peter Milausnic  
 Albert O. Miller III  
 M. Lynn Moehl  
 Tod Robert Moreton  
 Fariborz B. Nasser  
 Anthony Scot Natalie  
 Darryl Mitsuo Nishihara  
 Brian Christopher Oyler  
 David D. Painter  
 Kristen Bonnell Pate  
 Elise Sophia Pokrzywinski  
 John Charles Pritchett  
 Tony Lee Ratliff  
 Jocelyn Hidalgo Redona  
 Mark Andrew Riese  
 Ryan L. Ross  
 Theresa Ann Ross-Gonzalez  
 Todd R.W. Saalfrank  
 Andrew Clark Schemehorn  
 David Eric Schmidt  
 Mark F. Sills  
 Mark Alan Sitzman  
 Barbara F. Smith  
 Kathleen Ann Smith  
 Tonya Renee Stewart  
 Roderick Paul Strickland, Jr.  
 Michelle Renee Tompkins  
 David K. Warner  
 Jami Lynn Warner  
 Judith Renee Waskow  
 Marla Kay Wilson  
 James Bryant Wines

## POSTDOCTORAL PROGRAMS

(Graduates July 1993 through June 1994 and Titles of Theses)

### Dental Diagnostic Sciences (MS degree)

Theodore K. Barss  
*Effects of topically applied epidermal growth factor on the healing of adult rat oral mucosa*

### Dental Materials (MSD degree)

Nels Ewoldsen  
*Laboratory study of type II light-cured glass ionomer cements as pit/fissure sealants*

### Endodontics (MSD degrees)

David C. Brown  
*In vitro comparison of apical extrusion of sodium hypochlorite during endodontic canal preparation*

Thomas G. Oldag  
*Root canal working length determination using the RadioVisioGraphy monitor image*

Douglas L. Ramsey  
*Examination of the sealing ability of photo-initiated glass ionomer cements as root-end filling materials*

Bart C. Tirrell  
*Interpretation of chemically created lesions using direct digital imaging*

### Operative Dentistry (MSD degrees)

Rosana Benedetti  
*Shear bond strength of three adhesive systems to amalgam, base metal, and noble metal*

Andréa G. Ferreira Zandoná  
*The local Shwartzman phenomenon and human dentin permeability to endotoxin*

Shuja Ul Haq  
*Effects of varied powder-to-liquid ratios on dentin bond strength, tensile and compressive strength and solubility of light-cured, hybrid type II glass ionomers*

Fadi G. Kyorkaji  
*Evaluation of bond strength between resin and porcelain using a shear test*

Jose Oliveira  
*Effect of bonded amalgam restorations on the fracture strength of teeth*

Maria del Carmen Piña  
*In vitro evaluation of the dehydration of the new type II light cured glass ionomer*

### Oral and Maxillofacial Surgery (Certificates)

Robert T. Bergman  
 Owen M. Forbes

### Orthodontics (MSD degrees)

Timothy J. Alford  
*IGF-I receptor localization and constant infusion of a supraphysiologic dose of IGF-I in the Sprague-Dawley rat*

Grant Bailey  
*Trabecular adaptation to continuously loaded endosseous implants*

Richard I. Ng  
*Comparison of tensile bond strengths of glass ionomer cements using hydroxyapatite coated and uncoated orthodontic brackets*

Anthony M. Puntillo  
*Bone remodeling and strain variation following altered mandibular condyle loading in retired breeder rabbits*

Charles Allen Sadler, Jr.  
*Cephalometric study of non-cleft parents of children with cleft lip, cleft lip and palate, and cleft palate: Evidence to support a different etiology for isolated cleft palate versus cleft lip?*

### Pediatric Dentistry (MSD degrees)

Stephanie M. Litz  
*Craniofacial morphology in familial cases of cleft lip/palate: phenotypic heterogeneity and genetic predisposition in unaffected family members*

Sonya L. Wu-Ng  
*Binding of oral *Veillonella* species to saliva-coated hydroxyapatite*

### Periodontics (MSD degrees)

Jeanne L. Barss  
*In vivo study of the effect of initial periodontal therapy on the presence of *Entamoeba gingivalis* in adult periodontal patients*

Craig E. Bundy  
*Influence of three growth factors on protein synthesis by human gingival and periodontal ligament fibroblasts in vitro*

Tom Corwin  
*Adsorption and desorption of <sup>125</sup>I platelet derived growth factor to nondemineralized and demineralized human dentin*

Hans-Dieter John  
*Effects of methylcellulose, platelet derived growth factor and insulin-like growth factor and e-PTFE membranes on wound healing*

### Prosthodontics (MSD degrees)

Máirtín Noel Brennan  
*Effect of four provisional cements and two cleaning methods on casting retention*

Mitsunobu Okamura  
*Effect of impression orientation on the physical properties of dental stones*

Silvia Valderrama  
*In vitro evaluation of the marginal and internal adaptation of titanium copings and metal ceramic crowns*



## DENTURE ADHESIVES TESTED AT NEW OHRI EXTENSION

To visit the Denture Research Facility, the newest research division of the Oral Health Research Institute, you've got to look beyond—*way* beyond—the little building on Beauty Avenue.

The Institute, located on the southwest side of the IUPUI campus, has found room for its new program in the Walker Plaza all the way over on Indiana Avenue, which is near the northeast edge of campus.

At this site the Institute's researchers have embarked on a comprehensive series of studies that compares the effectiveness of various denture adhesives. Julie King and Charlene Ellis are the study coordinators for the facility, which has been leased by the dental school for five years. Drs. William Eichhold and Roger Isaacs, assistant scientists at the Institute, serve as the primary on-site faculty researchers, and Dr. Bradley Beiswanger, the Institute's associate director of clinical research, serves as the project director.

The project poses an unusual challenge, both to the persons who are joining the pool of study subjects and to the persons who are running the studies.

The volunteers must be able to remain at the Walker Plaza from 7 am until 5 pm for up to four days in a row. And the researchers have to locate volunteers—about 40 patients each day—who have this kind of time to spare.

Recruitment efforts are being focused on denture wearers who are retired and residing in nearby downtown neighborhoods. "After having an adhesive placed in their dentures when they arrive in the morning, volunteers have to remain on site all day so that food intake can be carefully monitored and readings can be taken throughout the day," says Melissa Mau, the Institute's associate director for clinical research.

The spacious and recently renovated facility, on the first floor of the Walker Plaza building, is equipped with three operatories and all of the standard amenities of a dental clinic. The uniqueness of the place shows up in the "waiting room," which much more closely resembles a well-appointed community center.

Helping keep the volunteers occupied are a wide-screen television surrounded by comfy sofas and chairs, a reading and game area, a piano, and a dining room for meals and snacks. It's a large, pleasant facility with lots of windows that let in the sunlight and offer a view of busy streets and bustling sidewalks.

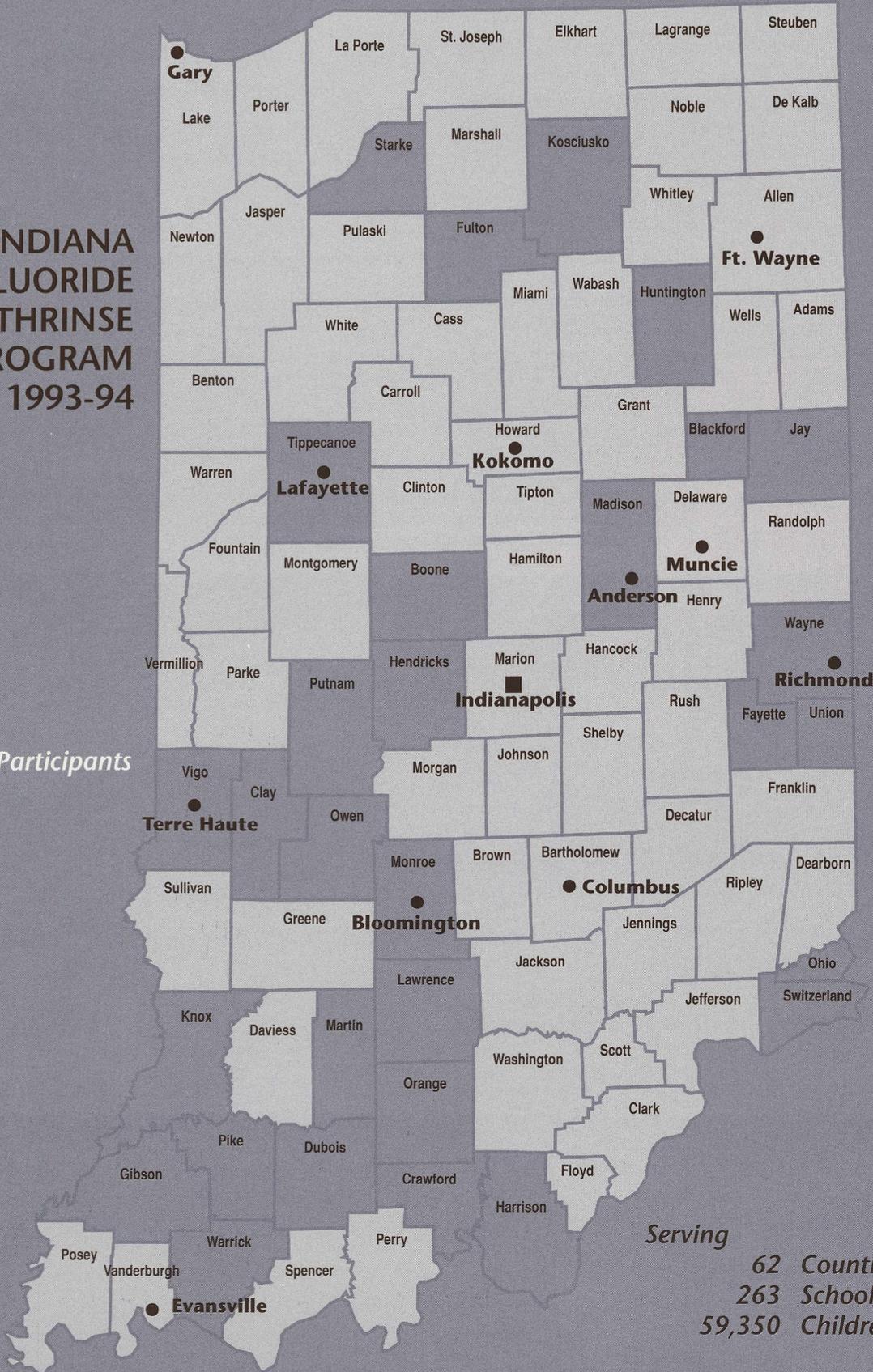
New studies begin every few weeks, and participants have the option of signing up for as many as they have time for. They also receive compensation for their time.

*Most dental reception areas are set up for patients to read magazines, not rally around a piano player. But the new Denture Research Facility offers a variety of pleasant diversions for patients who must remain on site all day. While patient Nancy Clements knits, others join in a song or two with patient (and pianist) Joyce Pfennig, who's getting a little help with the ivories from study assistant Shelly Small. Standing from left are patient Charles Peer, faculty researcher Roger Isaacs, study coordinators Charlene Ellis and Julie King (white coat), and patient Phyllis Gray.*



# INDIANA FLUORIDE MOUTHRINSE PROGRAM 1993-94

■ *Participants*



*Serving*  
**62 Counties**  
**263 Schools**  
**59,350 Children**

# A CUP OF PREVENTION

## *Longtime fluoride rinse program helps keep tooth decay at bay for thousands of Indiana's schoolchildren*

Tiny disposable cups containing a few milliliters of fluoride are a familiar sight in schools throughout the Hoosier state—and they have been for nearly two decades.

Last year alone, 59,350 elementary schoolchildren in 62 counties routinely rinsed their teeth with the contents of these cups as voluntary participants of the Indiana Fluoride Mouthrinse Program, a long-term community outreach effort administered by Indiana University's Oral Health Research Institute.

The rinse program began in 1976 as a cooperative venture of OHRI and the Indiana State Department of Health; it was preceded in the 1960s by "Brush-Ins," in which groups of children regularly brushed their teeth under supervision at school. An advantage of the rinse program is that it is much less messy to administer, says Sue Kelly, assistant director of clinical research at the Institute. She has been involved with the program for five years and is the current administrator.

While they are at school, the children rinse with fluoride for one minute each week under the supervision of a school nurse, teacher, or, in some schools, a volunteer parent or dental professional from the community. To participate, youngsters must bring signed consent forms from home.

For the cost of one dollar per child for the entire school year, the Institute supplies the fluoride, which is made into a solution by school nurses or other on-site program monitors; all materials and equipment (cups, napkins, trashbags, dispensing jugs and pumps); and a toothbrush for

the child to use independently of the program. Additional brushes can be purchased for 25 cents apiece.

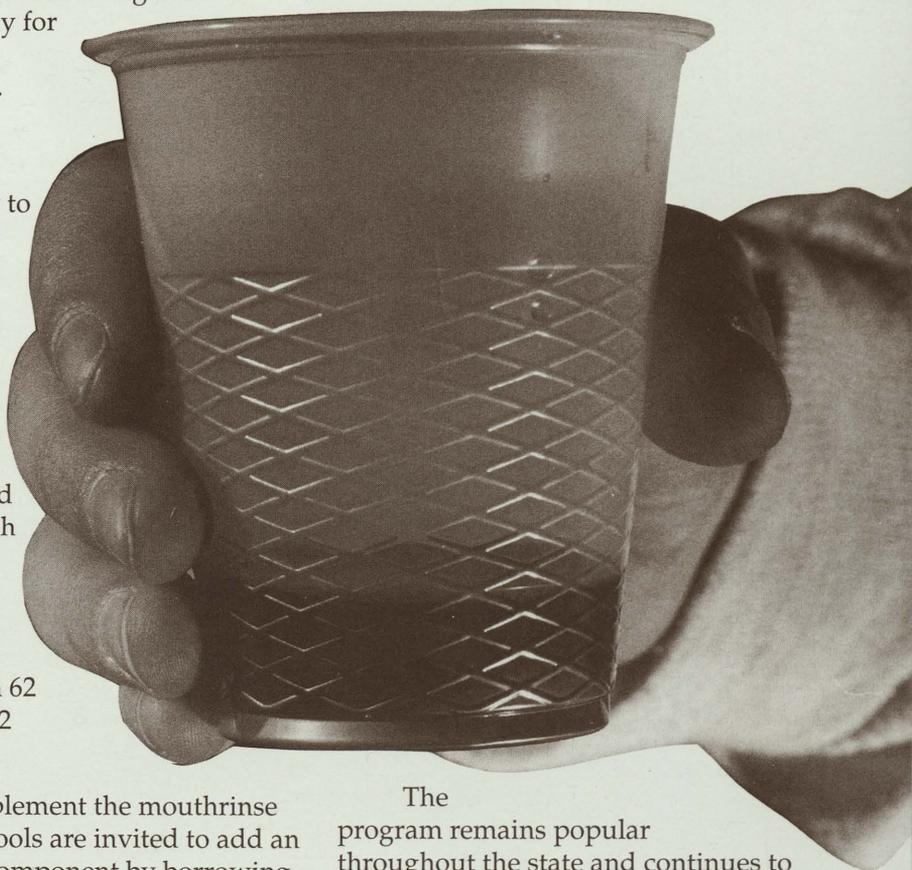
In some parts of the state, especially in rural areas, the Institute's program is sometimes the only opportunity a student has of obtaining a toothbrush, says OHRI employee Druscilla Kriech, who's been coordinating the project for about three years. Parent-Teacher Organizations often pay for the service if families can't.

It is Druscilla's responsibility to take all the materials and supplies, which arrive at the Institute in bulk, and turn them into individualized orders for each school. Last year, she assembled shipments to 263 schools in 62 of Indiana's 92 counties.

To complement the mouthrinse program, schools are invited to add an educational component by borrowing dental health films from the Institute and the Indiana State Department of Health. Word games and crossword puzzles highlighting the fluoride program and stressing the importance of good nutrition also are available upon request.

The number of schools choosing to participate in the program varies from year to year, a reflection of school budgets, time constraints, availability of on-site help, and perceived need for the program.

"Some schools that dropped out of the program because they thought they didn't need it anymore signed up again after the school nurses began to notice a decline in the oral health of their students," says Druscilla Kriech. Children benefit most, she says, by receiving fluoride from four sources: toothpaste, the community water supply, biannual fluoride treatments from the dentist, and a school fluoride rinse program.



The program remains popular throughout the state and continues to serve as a primary source of preventive care for many Indiana children, especially those without access to one or more of the other fluoride sources.



**Tartar Check**  
The Original Teeth Key Food  
**Tartar Check**  
The Original Teeth Key Food  
Reduces Tartar Build-Up by 40%  
Clean Teeth & Freshen Breath  
Prevents Gum Disease  
Keeps Gums Healthy

# CHECKING OUT TARTAR CHECK

**T**oby, a pooch belonging to dental dean H. William Gilmore, may be oblivious to his dental health; but he recognizes a tasty treat when he gets a whiff of one.

Toby recently made a late afternoon appearance in the dean's office to devour a couple of bone-shaped dog biscuits being test marketed by Heinz Pet Products as "Tartar Check," a healthful snack food for dogs.

Dr. George Stookey, IU's associate dean for dental research, was awarded the patent that led to development of the new biscuit, which cleans teeth, freshens breath, and has been shown to reduce tartar build-up on dogs' teeth by 45 percent.

A tartar-control ingredient, sodium hexametaphosphate, has been applied as a coating to the biscuits, which are manufactured by Heinz under a contractual agreement with the School of Dentistry through the IU Foundation.

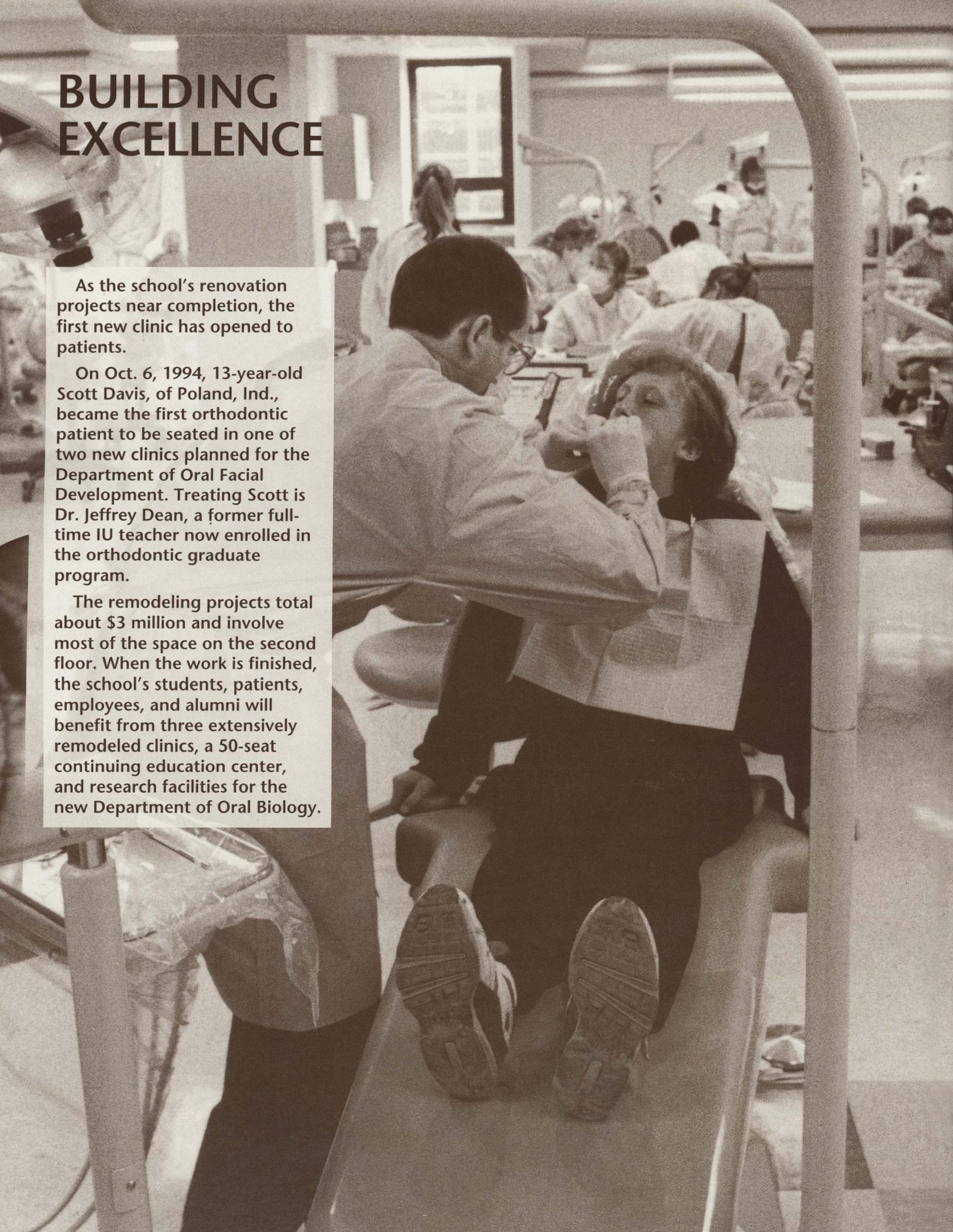
"This is the first of several applications of the patent we have planned," says Dr. Stookey, who leads a team in the Bioresearch Facility that has been experimenting with teeth-cleaning properties in pet foods since the early 1980s. "We are now at work on a tartar-control snack for cats, and we're also conducting studies to see what happens when this tartar-control agent is incorporated into the diets of exotic animals."

Dental faculty member Dr. George Willis has been working with the Indianapolis zoo to see if the patented procedure can be applied to the diet of baboons and other exotic animals.

**National distribution of Tartar Check begins in 1995.**

*Drs. George Stookey (left) and Dr. George Willis (rear) help Dean H. William Gilmore feed his dog Toby a Tartar Check biscuit. The product is the result of a long-term research project led by Dr. Stookey.*

# BUILDING EXCELLENCE



As the school's renovation projects near completion, the first new clinic has opened to patients.

On Oct. 6, 1994, 13-year-old Scott Davis, of Poland, Ind., became the first orthodontic patient to be seated in one of two new clinics planned for the Department of Oral Facial Development. Treating Scott is Dr. Jeffrey Dean, a former full-time IU teacher now enrolled in the orthodontic graduate program.

The remodeling projects total about \$3 million and involve most of the space on the second floor. When the work is finished, the school's students, patients, employees, and alumni will benefit from three extensively remodeled clinics, a 50-seat continuing education center, and research facilities for the new Department of Oral Biology.

I FIND THE GREAT  
THING IN THIS  
WORLD IS NOT SO  
MUCH WHERE WE  
STAND,  
AS IN WHAT  
DIRECTION WE ARE  
MOVING



*OLIVER WENDELL HOLMES*

INDIANA UNIVERSITY  
PURDUE UNIVERSITY  
INDIANAPOLIS



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**(ALUMNI BULLETIN)**  
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