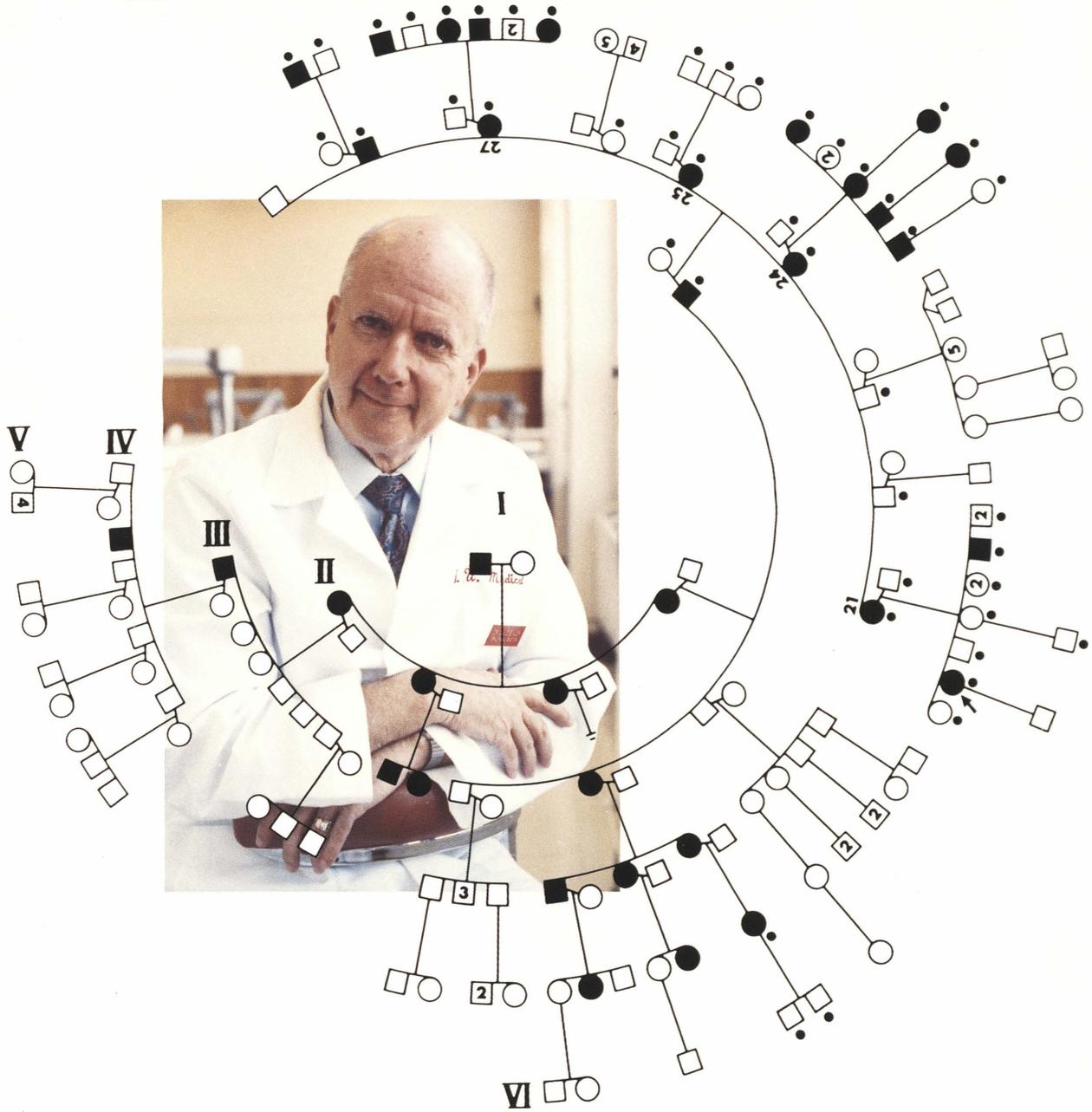


ALUMNI BULLETIN

NS Volume 5, Number 4
Summer 1991



Indiana University
School of Dentistry

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On the Cover

All in the Family. Dr. David Bixler, head of Indiana University's Department of Oral Facial Genetics, surrounded by a family history he prepared in the late '60s to show the presence of the inherited disease dentinogenesis imperfecta (D.I.) in an extended family from Youngstown and Akron, Ohio. An autosomal dominant trait that is passed to one of every two children, D.I. has a variability of clinical expression but typically is characterized by grayish teeth with an opalescent sheen; bulbous shaped crowns; hypoplastic enamel; and absence of pulp chambers and root canals. The disorder occurs in approximately 1 of 8,000 North Americans. On the pedigree chart, females are represented by circles and males by squares. Solid figures indicate affected family members. A full report on activities in the oral facial genetics department begins on page 2. (Cover photo of Dr. Bixler by Susan Crum)

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The *Alumni Bulletin* is an Indiana University School of Dentistry publication directed to members of the IUSD alumni. There are four issues each year: Fall, Winter, Spring, and Summer. Material included herein does not necessarily represent the official position of the School. Editorial office address: Editor, *Alumni Bulletin*, Indiana University School of Dentistry, Room 104, 1121 West Michigan Street, Indianapolis, IN 46202; and telephone: 317/274-5405.

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Notes from the Dean's Desk

The IU School of Dentistry/NASA bone research project that was launched aboard space shuttle Columbia on June 5 is—at the time of this writing— orbiting 184 miles above Earth.

A milestone was reached on May 12, 1991, when another group of outstanding students graduated from IUSD. As in past years, the classes of 1991 surpassed all previous ones in level of achievement in the disciplines of dental health care. A report of the award recipients begins on page 33 of this issue of the *Alumni Bulletin*, and a list of all 1991 graduates will be included in the *Special Edition Annual Report*, published in the fall. I'm confident that, as alumni of Indiana University, these young professionals will make many significant contributions for years to come.

A primary concern of dental educators these days is infection control and all the related issues necessary to establish a safe, sanitary treatment environment for patients and members of the dental team. Almost all dental care treatment involves invasive procedures, placing much more responsibility on dentists than professionals in other medical fields. One of the most important committees at the School of Dentistry is the one for Infection Control and Hazardous Waste Materials. This committee, chaired by Professor Charles J. Palenik, is based in the Department of Oral Microbiology under the direction of Dr. Chris H. Miller. Courses to update faculty, staff, and students will be offered this summer to comply with Indiana laws regulating infection control. Plans to expand and consolidate these services include the use of disposable outer-wear by all individuals working in the clinics—a major change for the school. An infection control team led by IU faculty serves as a consulting agent to Indiana dentists and health-care professionals to ensure that the latest methods of infection control are employed in the dental office environment. This concern alone represents many of the major changes we are encountering in the way dental care is provided today.

Change begets change, and these new developments in dental treatment create many opportunities for research. More and more students are finding the need to join the faculty in studying unique problems encountered in the treatment of patients. New programs such as those in imaging, cell culturing, and multidisciplinary studies in the Biomechanics/Biomaterials Laboratory are continually being developed to fill the ever-increasing need for a sound scientific base. Although state funds for new programs have not increased, expansion into new areas of research has—and a new blend of scientists and health professionals are working together not only to accumulate scientific data, but also to find a means of support for the needed programs. The IU School of Dentistry/NASA bone research project that was launched aboard space shuttle Columbia on June 5 is—at the time of this writing— orbiting 184 miles above Earth. Dr. Eugene Roberts, IU chairman of orthodontics, is a co-investigator of the experiments, which are designed to study the effect of weightlessness upon bone mass. This NASA grant-funded project is helping pave the way for long-term space travel for humans; the project will also be instrumental in the development of new clinical procedures for treating skeletal tissues.

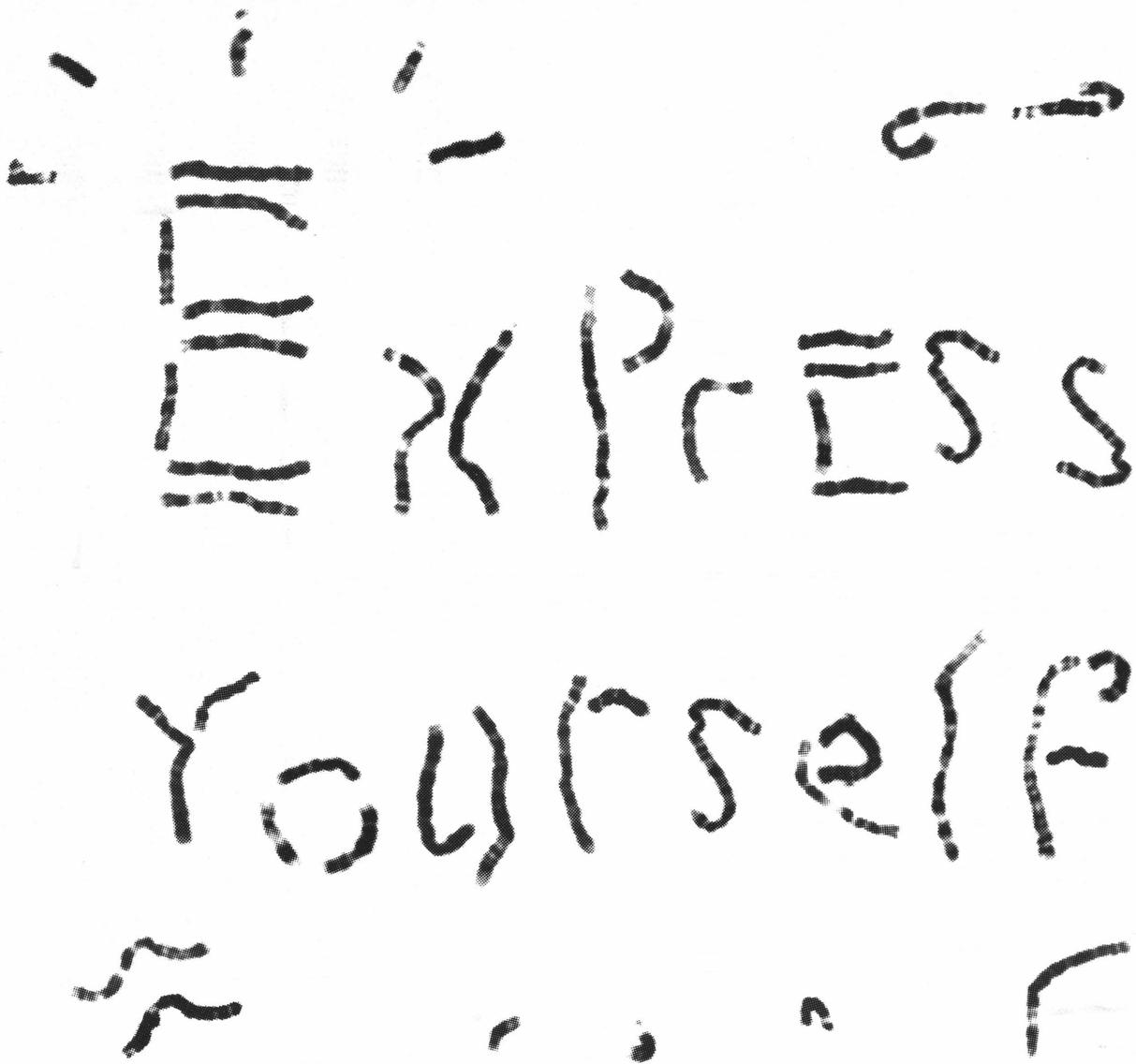
The upcoming accreditation site visit in fall of 1992 is encouraging innovative planning in the dental and dental auxiliary curriculum. Improved scheduling of student time will create more clinic opportunities for comprehensive patient care and experience with the dental team concept. The students' education will be greatly enhanced by this increased clinical experience, which is being modified to more closely simulate the private practice setting. A stronger clinical education is a top priority of the faculty at IUSD.

H. William Gilmore



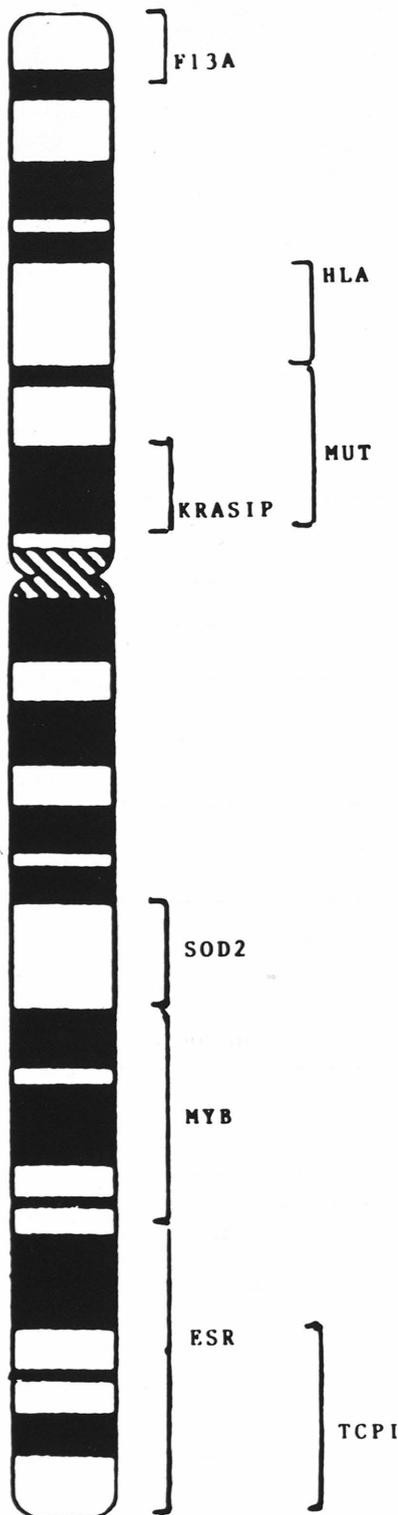
Demonstrating a digitizer. *Dr. Bixler and third-year dental student Kurt F. Martin with the school's computerized digitizer, the key instrument in much of IU's oral facial genetics research. Using radiographs and specific X-Y coordinates, researchers record landmark positions of the anatomical features of the face. Such data are then analyzed by a software program developed by Dr. Sudha Saksena. Mr. Martin, who was a 1990 recipient of a Short-term Research Training Grant from the National Institutes of Health, used the digitizer to see if there are differences in the facial features of normal, non-cleft persons in families with multiple cases of cleft lip and/or palate and normal persons belonging to simplex families (one-time sporadic cases of cleft lip and/or palate).*

To prepare our title, "Express Yourself," we encouraged IUPUI graphic designer Diane Alfonso to express *herself*. Exercising a few artistic liberties, she soon found the name of the article lurking within the photographic image of one full complement of Giemsa-stained human chromosomes—those 46 strands of DNA that house the human body's many thousands of genes. (And, just in case anyone notices there are 48 chromosomes in our title instead of 46, Diane confesses to having used chromosome #2 three times.)



Photos and Story by Susan Crum

With a Career Development Award from the National Institute of Dental Research in one hand, and some intriguing theories about the causes of cleft lip and palate in the other, Dr. David Bixler set about the task of creating a Department of Oral Facial Genetics for Indiana University. Twenty years—and four NIDR Institutional Training grants—later, the tiny department employs research methods that include computerized digitizers, protein electrophoresis, and oral examinations to better understand many types of gene expression in the human being. Dr. “B” recently shared some of the department’s history and described, with input from his colleagues, activities currently under way in Room 209B of the IU dental school.



Graphic reproduction of banded chromosome #6, upon which Dr. Bixler has focused his search for a major gene causing clefting. Each of the human body's 46 chromosomes are differentiated both by size and staining patterns (bands). The diagonal lines on the graph represent the centromere, which divides the chromosome into two parts—the p arm and the q arm. Chromosome pairs are separated—each one going to a new cell—during mitosis. The cell division apparatus accomplishes this by attaching to each centromere. The bracketed codes on the right indicate loci of specific genes found on this chromosome. According to Victor McKusick's most recent edition of *Mendelian Inheritance in Man*, about 100 human traits regulated by single genes have been located on chromosome #6 thus far, and a total of 4,937 human traits have been located on all 23 chromosome pairs.

In the midst of counting cavities for a Procter & Gamble study in the early '60s, David Bixler suddenly felt a twinge of regret.

"Whatever happened to the zoologist in me?" he wondered to himself. A 1956 graduate of IU's PhD program in zoology and a great admirer of the outstanding faculty in that Bloomington department, David had planned to pursue a college teaching career himself. Instead, he wound up embarking on a circuitous path to medical genetics.

His first stop, strangely enough, was dentistry. During his PhD program he had been helped along by two dental school faculty members—oral pathologist William Shafer, whose expertise in salivary glands David sought for his dissertation on the same subject; and chiefly by preventive dentistry pioneer Joe Muhler, who ultimately convinced the young graduate to pursue a dental degree.

As a senior dental student, David was allowed to teach biochemistry to underclassmen. He spent his free time scrubbing rodents' teeth for Dr. Muhler's studies related to Crest toothpaste. After graduating in 1959 he stayed on at the dental school as a full-time teacher of biochemistry and oral biology. He also was hired by Procter & Gamble as a part-time clinical consultant.

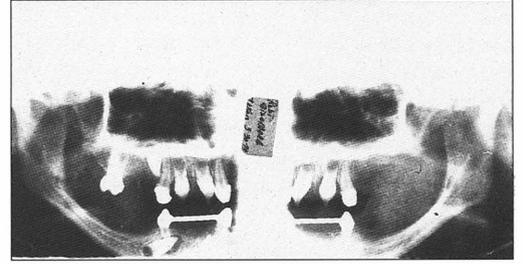
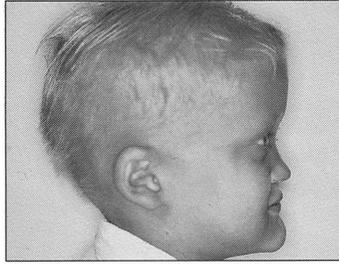
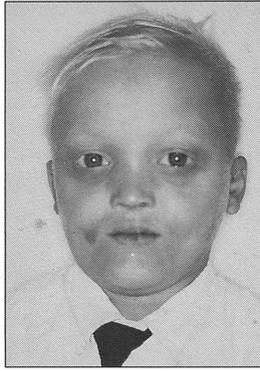
"But I finally decided that I wanted to make better use of my five years of zoology," says Dr. Bixler, who, soon after leaving the consultancy with P&G, attended a national symposium on dental genetics. "I went mostly out of curiosity," he says, "and wound up with some answers for my own career."

Back on campus, he found his connection to genetics in Dr. Donald Merritt, head of IU's newly formed Department of Medical Genetics. "Don had been a medical consultant at NIDR, and he knew there was a place for genetics in dentistry. I explained my interest in research to him, and we hit it off from the beginning." Obtaining a joint teaching appointment in medicine, Dr. Bixler once again plunged into a training program, this time in the medical center's hospital wards.

"In zoology, my experience with genetics had been mostly with microorganisms. I got to see a very different aspect of genetics in the hospitals. Don soon had me examining patients, conducting genetic work-ups, and providing patient counseling." Dr. Bixler recalls that at first he was not welcomed with open arms by his medical colleagues, who questioned the presence of this zoologist/dentist in the clinics. His "double doc" status, in fact, did nothing to help him fit neatly into *any* professional category (he was told in 1956 that only seven other men in the nation held both PhD and DDS degrees).

"I understood the challenge of wearing different hats," Dr. Bixler says with a laugh. He even endured some ribbing at the dental school, mostly from crown and bridge chairman and legendary curmudgeon Dr. John F. Johnston. "John called me 'baldy' and 'genius' and other endearing terms, but I knew he was just teasing. He wanted me to do well and was serious in wanting to help me." As Dr. Bixler's reputation in medical genetics grew, curiosity about his position dwindled.

Dr. Bixler spent the last part of the '60s translating his experiences in medical genetics into information that would be



Several research projects in the department have focused on identifying gene carriers of hypohidrotic ectodermal dysplasia, an X-linked recessive disorder characterized by light-colored, scanty hair; an inability to perspire; and congenitally missing teeth.

pertinent in the dental classroom. Building courses in dental genetics from the ground up, he participated in several key national symposia designed by leaders in genetics who primarily were interested in promoting discussions of how genetics could be incorporated into predoctoral dental school curriculums. (These meetings eventually led to formation of the Society of Craniofacial Genetics in the 1970s, with Dr. Bixler serving as first president. Today, the Society continues to support the teaching of genetics in dental schools, although its members are sometimes disheartened that few schools offer genetics to undergraduates.)

Gradually, Dr. Bixler assembled enough research material and courses at the pre- and postdoctoral level for dental dean Ralph E. McDonald to recommend to the IU Board of Trustees that an official department be created. By the time the Department of Oral Facial Genetics sprung to life on January 1, 1971, a dozen students had already received training in the oral facial complex through an umbrella program in medical genetics. (The name "oral facial" is an operational title, signifying the major area of the degree, which is awarded only in medical genetics.) "We decided on the title 'oral facial' genetics instead of 'dental' genetics because I felt that our mission should encompass much more than teeth," Dr. Bixler explains.

And it has. The oral facial program has been a training ground for dentists, physicians, and other scientists who have researched a diverse group of genetic topics ranging from tooth size in Pima Indians to heritable malformations of the ear to ultrasound studies of the fetal face.

The research training and projects of more than 35 students have been made possible with a series of grants launched by the NIDR in 1974. To date the department has received four consecutive five-year Institutional Training grants (1974-1993). Current postdoctoral fellows are Dr. Soraya Beiraghi, who is conducting a search at the molecular level to identify a major gene that predisposes persons to clefting; and Dr. Paul Green, who is using a grant from the American Cleft Palate Association to see if it is possible to identify unaffected carriers of the cleft lip/palate genetic disorder by examining groove patterns of the lip.

Studies focusing on clefts of the lip and palate have served as the cornerstone of Dr. Bixler's program since its beginning. They also represent the area of genetics to which he has devoted his own unflagging energy through personal contributions to the field. His once-in-a-lifetime research

opportunity first came knocking during a cocktail party in Cincinnati in 1966.

Ibumped into Dr. Poul Fogh-Andersen, a surgeon and genetic researcher from Denmark who in the 1940s had written the landmark thesis on clefts," says Dr. Bixler. "Dr. Fogh-Andersen formed the original hypothesis on how persons inherit cleft lip, and was in fact the first researcher to propose that there was any kind of inheritance involved at all. Fogh-Andersen theorized that a single gene was influencing the occurrence of clefts." When Dr. Fogh-Andersen invited Dr. Bixler to join him in Denmark for a year to study cleft patients, Dr. Bixler figured the offer was nothing more than party chatter. After corresponding with the surgeon for nearly two years, Dr. Bixler received a five-year Research Career Development Award from the National Institute of Dental Research, which favored his taking a one-year sabbatical abroad. Soon, he was on his way to Copenhagen, and to a geneticist's dream come true.

"I spent that year recording Fogh-Andersen's data on 5,500 persons with clefts who had been born in Denmark since 1941, and in 1972 I went back for a follow-up visit," he says. "These data represented virtually a complete ascertainment of everybody in the country with a cleft—a total data sample!" His specific research goals were to examine families with multiple members affected with cleft lip and palate for evidence of incomplete gene action in the non-cleft relatives. From those records emanated many IU research papers, and ultimately the ones advancing the single-gene theory—work published by Dr. Bixler and his postdoctoral students Dr. Michael Melnick (PhD '78), who is now director of the craniofacial training program at the University of Southern California, Los Angeles; and Dr. Edward Shields (DDS '70, PhD '79), who now chairs the oral biology department at McGill University Faculty of Dentistry, Montreal. Dr. Shields resided in Copenhagen for two years to continue the cleft studies for his doctoral program.

The response to their publications? "Plenty of flack at first," Dr. Bixler laughs, noting that most scientists at the time leaned toward a multifactorial hypothesis (and still do) to explain the mode of inheritance for clefting. Dr. Bixler exchanged ideas with Dr. Cedric Carter, a pediatrician in England whose clinical data supported the multifactorial hypothesis; however, reanalysis of Carter's data several years later gave strong support for the major gene hypothesis. The pendulum of thought on what causes clefting had begun to swing slowly in Dr. Bixler's direction.

As with most questions related to human genetics, however, the definitive answer to causes of the clefting trait remains one or two elusive steps ahead of the researchers. Recent studies conducted in the department by anthropologist Richard Ward identified measurements of bony landmarks of the face in cleft patients that could reflect gene action that is not apparent phenotypically (by clinical examination). Every geneticist faces the problem of the penetrance factor—the frequency of gene carriers for a given trait who also *show* the expression of the trait. In other words, not all persons who have a specific gene will express the gene clinically.

In Dr. Fogh-Andersen's data on cleft patients, the penetrance factor was only 30%. Dr. Ward's studies have pushed the penetrance factor to 70%. "We've been criticized because our data did not have 100% penetrance," says Dr. Bixler, "but I think Rick's studies have shown we are heading in the right direction." He is confident that the department's latest quest for a major gene, which is under way at the molecular level, will bring the clefting project full circle after more than two decades of investigation.

Postdoctoral fellow Soraya Beiraghi faces no small feat: To succeed, she must identify one gene—out of perhaps as many as 100,000 genes in the human complement—and pinpoint the gene's location on one section of one of the human body's 46 chromosomes.

(This type of search, referred to as gene mapping or gene probing, is best known as the primary research methodology of scientists throughout the country who have recently been given the green flag to begin an ambitious, government-funded program known as the Human Genome Project—a \$3 billion, 15-year attempt to unravel the mysteries of disease causation lurking within the human DNA molecule.)

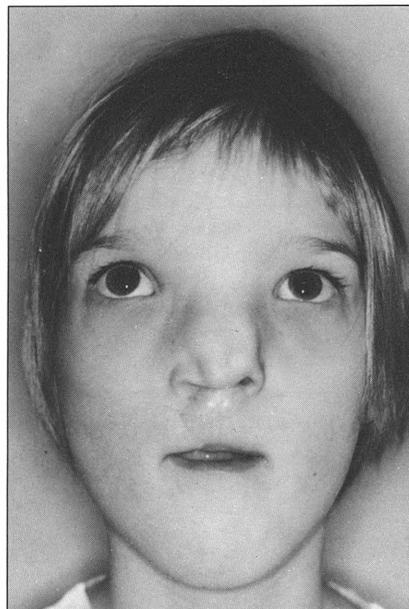
Gene probing is accomplished primarily by gel electrophoresis, a biochemical technique that separates the elements of DNA into segments that are distinguished by size and charge. Left behind in the gel on the scientist's photographic paper after this process takes place is an intricate pattern of bands which can be compared to the band formation

of other family members. "We are trying to find clefting linked to these biochemical traits," says Dr. Bixler. To avoid turning the search into a monumental "gene in a haystack" nightmare that could take years, the researchers have attempted to narrow the field of nearly unlimited locations by searching in a likely "neighborhood"; in this case, the logical

To avoid turning the search into a monumental "gene in a haystack" nightmare that could take years, the researchers have attempted to narrow the field of nearly unlimited locations by searching in a likely "neighborhood."

spot to begin was determined to be on the distal end of the "p" (or upper) arm of chromosome #6. "We decided to look there first because the Danish families we had studied showed linkage between clefting and blood group factor F13A, and it previously has been determined by other researchers that F13A is located there."

The molecular study represents an exciting new component to the department's research, although Dr. Bixler, like any scientist worthy of the title, understands the folly of looking to any one method as a panacea to all of a researcher's woes. He admits good-naturedly that he has not ruled out the possibility of an eventual "wedding" between his one-gene hypothesis of cleft inheritance and the multifactorial theory. "I'd have to say that I've changed my mind somewhat over the years," he says affably. "Today, I would say there is definitely one major gene at work with clefts, but there may also be many other genes having a secondary influence. And it



Hypertelorism-microtia-clefting, also known as HMC or Bixler syndrome, was reported by Dr. Bixler in the late '60s, when this child and her sister came to the clinic for cleft lip and palate counseling. No previous cases in the literature had reported this association of defects. There are now five cases in the world literature.

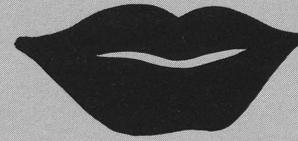
would be difficult to prove that any trait is *always* 100% genetic and *never* affected by environment. The major gene hypothesis does not deny environmental influences. The research challenge comes in determining how the genes and the environment interact, and which supervenes.”

With medical researchers in hot pursuit of the Human Genome Project, Dr. Bixler is hopeful, but not very optimistic, that some of the excitement will rub off onto the field of dentistry. Never a large part of any dental school’s curriculum, oral facial genetics has been traditionally given low priority in dental programs that must by necessity pack as much clinical practice into four years as possible. It is not much better at the post-doc level: In the old days, Dr. Bixler’s NIDR training grant was one of four in the nation. Today, his grant is the only one remaining; during an informal survey of genetics teachers in dental schools five years ago, Dr. Bixler counted a mere 26 positions, 12 of them filled by persons who had trained with him here at IU.

“Obviously, the dentist in practice can get by without courses in genetics,” says Dr. Bixler, “but I encourage undergraduate students to start thinking of their patients in a different way. If for no other reason than for a change of pace, it can be interesting to look beyond the amalgam you’re putting into a molar to notice, for example, the patient’s short frenum attachment, which could be a heritable trait causing speech problems.

“Or, what if Johnny comes in to your office with a lot of cavities and Johnny’s mom tells you it’s a genetic problem since she and her husband both were wearing dentures by the time they were 30? How do you answer her? If you agree that it’s genetic, you’re wrong. If you disagree and say it isn’t genetic, you’re still wrong. To properly counsel her, you should know that plaque comes from salivary proteins, which are controlled by single dominant genes. You must also understand the contributions of environmental factors, all of which ultimately comprise the multifactorial nature of tooth decay.” A background in genetics would also benefit dentists when dental patients having relatively common genetic conditions such as premature loss of deciduous teeth, cleft lip and palate, and many other syndromic problems affecting the face come to the office for treatment.

To grasp the full impact of genetics in dentistry, one need only thumb through any issue of the *American Journal of Medical Genetics*, where photo after photo graphically and often tragically reveal the human being’s extraordinary ability to express variation when genetic codes have gone awry—and how frequently those problems affect the face and the dentition. Of the estimated 5,000+ genetically related diseases now known to man, Dr. Bixler says that perhaps as many as 40% of them include traits that manifest in the face. Reason enough, it would seem, for universities to increase the role that genetic programs play in the education of dentists.



Julia Roberts, Tom Cruise. Paul Newman, Sophia Loren. We stand in line to see their movies, treasure their autographs, and hyperventilate if we find ourselves sitting next to them on an airplane. Why?

Because of their acting talent? Maybe. But Dr. Bixler will tell you that a more fundamental attraction may be at work on us when we gaze upon the “stars.”

Fact is, Julia, Tom, Paul and Sophia possess good acting skills—and enormous kissers! “If you take a close look at movie stars who are perceived as glamorous, you’ll see that most have large, wide mouths,” says Dr. Bixler. “We hold today’s stars to a standard of beauty originating with the art of Leonardo da Vinci.”

Studies have shown that wide-set eyes are also seen as an esthetic advantage in western culture. “I sometimes call it the ‘Jackie Kennedy look’ when I’m counseling patients,” says Dr. Bixler, “because even though her eyes are significantly wider apart than the standard, she is regarded by society as a beautiful woman.” The reference has calmed worried parents who have brought children to Dr. Bixler’s clinic with mild ocular hypertelorism.

When does normal variation of the human face cross the line into the realm of abnormal? “Scientifically, anything measuring more than two standard deviations from the mean of the population is defined as abnormal—but it’s a tricky definition,” Dr. Bixler concedes. “If a child has an IQ of 80 instead of the standard 100, is he retarded? Statistically, yes. But lots of people with IQs of less than 100 go to college. All you can say is that this person’s phenotype is significantly different from the mean of the average person in a particular population.

“It’s fascinating to listen to plastic surgeons talk about the face. Most disagree on what constitutes the ‘best’ face, although everybody agrees on certain points. We like to think we work with precise definitions, but it frequently boils down to subjectivity. Defining what is acceptable versus what is abnormal in the human body is one of the most fundamental problems dealt with by physicians and dentists. Our goal is to treat the abnormal, and let the normal go home.”

Dr. Raj-Rajendra A. Patel

Research Associate
Oral Facial Genetics

■ One way of solving the mysteries of the genetic “forest” is by closely examining the trees—family trees, according to clinical geneticist Dr. Raj-Rajendra A. Patel.

Clues to a patient’s oral facial condition are often found subtly disguised in the faces of cousin Billy, sister Sue, great-uncle Fred and other members of the family tree. Snapshots from the family photo album can be a valuable tool in steering the geneticist toward a correct diagnosis of genetically inherited traits and disorders.

Gathering a thorough family history, or pedigree, is as important to a patient’s diagnosis as a thorough physical examination, says Dr. Patel. During a typical week in his role as the oral facial genetics department’s chief clinical consultant, he examines a variety of patients throughout the Medical Center—from newborns on the third-floor of Riley Hospital to prosthodontic patients at the dental school to neurosurgical patients at Emerson Hall.

He also presents guest lectures to graduate and postdoctoral students in various disciplines on campus and serves as consultant on IU’s Craniofacial Anomalies Team, which conducts a weekly clinic at Riley for young patients with facial deformities. “Genetic counseling is almost always required, even for patients with simple lip or palate clefts,” says Dr. Patel, a University of Bombay dental graduate who earned an IU master’s degree in medical genetics in 1990 and has followed Dr. Bixler’s lead in studying syndromes with clefting.

“After an infant with a cleft has been fully examined, and family and pregnancy histories taken, we try to figure out to which major category this cleft belongs,” he explains. “If the baby also has other dysmorphic features such as ear deformities, absence of a kidney,



Clinical geneticist Raj-Rajendra Patel examines a three-month-old infant who was born with holoprosencephaly. This condition, which can be either inherited or sporadic, involves the incomplete separation of the brain into two hemispheres. Patients usually have severe mental retardation. Bilateral cleft lip and palate are also frequently seen. On this day the baby will be discharged from Riley Hospital and placed into the care of her parents. Dr. Patel will meet with the parents again for an in-depth genetic counseling session.

and shortness of stature, we suspect that the cleft is part of a syndrome. Then we can ask for a number of useful diagnostic tests—CT scans, radiographs, biopsies, chromosome studies—to define the type of clefting syndrome, of which more than 250 have been reported.

“If the infant has a simple cleft of the lip or palate and is without other dysmorphic features, the cleft falls into the non-syndromic class, of which there are two types: sporadic and familial. Sporadic clefts show a multifactorial type of inheritance that is the result of a combination of genetic and environmental factors. Typically, they occur only once in a family. With the familial pattern of non-syndromic clefting, clefts occur in multiple family members. Familial cases are probably the true inherited clefts.”

Usually, there are no simple answers. “I may get a call from the Riley

Dental Clinic to come over and examine a six-year-old boy who has very fair skin, no teeth, and almost no hair. We may determine that the child has ectodermal dysplasia—but there are about 50 variations of this disorder alone!” To further narrow the field of diagnostic possibilities, geneticists turn to Victor McKusick’s 2,028-page tome, *Mendelian Inheritance in Man*, a computerized listing of more than 5,000 genetic disorders.

Sometimes, there are no answers at all. “About 60% of the time we fail to come up with a diagnosis,” Dr. Patel says, recalling one typical day last winter when he was called to the dental school’s orthodontic department to evaluate a candidate for orthodontic treatment who was missing some fingers and toes. “The orthodontist also noticed subtle differences in the facial area, and the examination turned up multiple

Dr. Rosario H. Potter

*Professor of Oral Facial Genetics, and
Director of Dental Biometry and
Research Computing*

skeletal problems in addition to the teeth and jaw. Since the patient had a similarly affected twin, we suspected the problem was genetic; but still we couldn't diagnose it. This case probably represents a new, unreported syndrome." It's a frustrating situation that geneticists learn to get used to. "In a case like this, orthodontists are in need of a long-term prognosis—they want to be able to predict facial growth so that they can provide treatment accordingly," says Dr. Patel. "But often, when an uncommon or undiagnosed condition is observed, you have no standard to compare it with. The best you can do is to document the case, get it published where other clinicians will see it, and keep a close watch on the patient for any unexpected changes that are likely to affect treatment."

■ "Just the facts, please." Or, in the words of a biometrical geneticist: "Just the *hard* data, please."

The search for documentable, reproducible measurements is what keeps Dr. Potter fascinated with a field of study she entered after earning an IU master's degree in medical genetics and joining the dental school faculty 24 years ago. Although she moved into the Oral Health Research Institute as head of the school's division of dental biometry and research computing in 1985, Dr. Potter continues to apply her skills as a statistician and a dental researcher to quantitative genetics and is especially interested in the work of genetic epidemiologists—researchers who look at diseases that are chronic, common to the population, and caused by a combination of genetic and environmental factors.

"This is very different from Mendelian genetics, in which researchers try to pinpoint one gene as the cause of a disease," Dr. Potter says. "Single gene diseases such as Huntington's Disease are not common, but when they strike they can be very severe." (IU medical geneticist and neurologist P. Michael Conneally and Harvard researchers made medical history in 1983 when they located the gene for Huntington's Disease on chromosome #4.)

By comparison, Dr. Potter says that a series of genes in combination with pre- and postnatal environmental factors is the probable cause of such common health problems as hypertension, diabetes, and cancer, as well as dentistry's common problems of dental caries, periodontal disease, and malocclusion. "One may have a genetic pre-

Genetic counseling is provided upon request by the IU Department of Oral Facial Genetics for patients referred by Indiana dentists and physicians and for individuals seeking information on their own. To arrange an appointment, call 317/274-8201 or write to Dr. David Bixler c/o Indiana University School of Dentistry, Room 209B, 1121 West Michigan Street, Indianapolis, IN 46202.



Part geneticist and part statistician, Dr. Potter splits her time between her own dental research activities and the statistical analysis of the research of others, through her directorship of the division of dental biometry and research computing. In addition to her degree in medical genetics, she holds a dental degree from the University of the East and a master's degree in pediatric dentistry from the University of Oregon.

The environment begins to exert its forces upon a human long before birth. "Even monozygotic twins are slightly different from one another," Dr. Potter says, "because they do not occupy the same space within the uterus."

disposition for a certain disease or disorder, but without the proper environment to bring it out the disease may not manifest," she says.

One of the best models for studying common diseases is that of monozygotic (genetically identical) twins and their offspring (half-sibs). "Conventionally, half-sibs are children that one person has had with two spouses at different points in life, so the ages of the children are typically quite disparate," says Dr. Potter, who has participated in a number of twin and family studies with Dr. Joe C. Christian, IU's chairman of medical genetics and a national expert in twin studies. "But the beauty of studies with twins and their offspring on age-controlled diseases is that these half-sibs are approximately the same age—they can be studied not only for genetic similarities, but also for environmental differences between families."

The environment begins to exert its forces upon a human long before birth. "Even monozygotic twins are slightly different from one another," Dr. Potter says, "because they do not occupy the same space within the uterus. Genetically identical twins may not be born the exact same size, and it's possible for one to have a defect at birth and one to be healthy; so we know that the uterine environment is playing a role. And remember, while the father contributes half of the genes to the offspring, the mother contributes her genes, her extragenic cell contents and everything *else*, including nutritional condition, physical makeup, and behavior patterns."

The dental structures of a human embryo are among the first to take form. "Dental embryology is fascinating!" exclaims Dr. Potter. "Tooth germs begin to form a few weeks after conception, and the teeth, jaws, and bones of the face undergo a tremendous amount of growth prenatally."

For years the National Institutes of Health has called upon Dr. Potter to serve on ad hoc committees that review proposals for program projects and center grants involving genetics, and she has presented a lecture series in Beijing, China, for the World Health Organization. Her recent guest editorials, appearing in the *Journal of Periodontology* and the *Journal of Dental Research*, have emphasized the need for moving studies of juvenile periodontitis out of the clinic and into the lab, where collection of hard data is possible. "In my view—which runs counter to the Mendelian approach—juvenile periodontitis is a heterogeneous disease," says Dr. Potter. "To properly study it, you cannot rely on clinical diagnosis alone. A series of laboratory studies based on biological markers is needed. Is there an immunological response to the bacteria causing the disease? Is the person deficient in a certain enzyme that will hamper, say, the body's blood cell response to the invasion by the bacteria? These are the types of questions, asked at the subclinical and molecular levels, that need answers. And, again, we must also determine in what ways the disease has been modified by the environment."

With research funds in general tightening up throughout the country, Dr. Potter is concerned that proposals related to the genetics of common dental diseases are being relegated to the back burner. The enormous environmental change of adding fluoride to our water and dental products no doubt helped remove such studies as the genetics of

dental caries from the priority list, but Dr. Potter says researchers are at this point merely scratching the surface of understanding the impact that genetics and environment have upon common dental diseases. She believes that, if the long-term goal of dental research is the eradication of these diseases, their genetic and family environmental impact must be dealt with. Particularly discouraging, she says, is observing this area of research winding down at a time when similar studies of common medical diseases are gearing up.

"There are still people who have rampant caries, no matter how well they care for their teeth," she says. "It's possible—with two persons of different genetic origin living in the same environment and taking extremely good care of their teeth and gums—for one to develop periodontal disease while the other resists it completely. We know that genetics plays a part, to a greater or lesser extent, in caries formation, periodontal disease, and malocclusion. The goal of the geneticist is to control a disease or lessen its impact. To do this with common dental diseases we don't propose to modify the genetic makeup of an individual. Instead, we want to look at the 'predictors'—the person's parents, grandparents, and other relatives—in order to identify the portion of the population with the highest genetic risk. At the same time, we want to tackle the environmental concomitants of the disease to lessen an individual's susceptibility. But the biggest stumbling block for graduate students and faculty in oral facial genetics has been the lack of funding."

Dr. Sudha S. Saksena

*Associate Scientist
Oral Facial Genetics*

■ Stickler syndrome is a serious, life-threatening disorder. But many people who have it don't know it.

Characterized by its great variability of expression, this autosomal dominant disorder can reveal itself clinically as nothing more severe than a cleft of the soft palate or a bifid uvula—signs that may not be diagnosed in the doctor's office.

But it's important for persons who are minimally affected with Stickler syndrome to realize they will pass the disorder to half the children in their family—and there's nothing mild about the syndrome when it is full blown: Affected persons typically have a "flat" midface with severe maxillary and/or mandibular hypoplasia, cleft palate, severe myopia, retinal detachment, deafness, and premature osteoarthritis.

Dr. Sudha Saksena is an IU-trained anthropologist (PhD '67) and former professor of anthropology at Muskingum College, New Concord, Ohio, who has spent the past 10 years of her career quantitatively mapping dimensions of normal variation of the human face. She now plans to define and characterize facial features outside the realm of normal in an attempt to aid in the establishment of an early and accurate diagnosis of persons with Stickler syndrome and similar disorders.

To properly assess abnormal facial features, Dr. Saksena realized in the early '80s that there was not a wealth of information available on what is considered "normal." Enrolled at the time as a postdoctoral fellow in oral facial and medical genetics at IU, she and several colleagues set out to define the range of normal variation in the human face.

Using a data base of 976 radiographic headplates taken on 190 healthy persons of European origin living in the Philadelphia area (ages 5 1/2 to 26 1/2),

Dr. Saksena identified 84 cephalometric variables to be grouped into 18 anatomic regions of the human face. It took three years to compile a computerized "map" of the face (side view), which was published in 1987 as *A Clinical Atlas of Roentgenoccephalometry in Norma Lateralis* (Alan R. Liss).^{*} Dr. Saksena's second atlas, *A Clinical Atlas of Roentgenographic Measurements in Norma Frontalis* (Wiley-Liss), was published last year. These atlases of normal facial dimensions, which also include an assessment of age- and sex-specific growth rates in children, offer physicians, dentists, and other scientists a point of reference in their assessment, treatment and diagnosis of patients or research subjects of European ancestry.

To study the facial features of persons with Stickler syndrome, Dr. Saksena plans to use a state-of-the-art diagnostic digital x-ray technology, developed by Phillips Medical Systems, to obtain high quality radiographic images that can be handled like conventional x-ray headplates. A series of computer software programs developed by Dr. Saksena (and already in use in other research projects in the department) will be used to digitize the headplate landmarks. "The programs permit computerized data analysis," she explains, "and eliminate errors that are common with measuring instruments, data entry, reading and recording. With these programs we can store the facial landmarks; transform X-Y coordinates into linear, perpendicular, angular and area measurements; and convert these measurements into standard deviation units using the lateral and postero-anterior normative values for North Americans of European ancestry. When we are finished, we will have a numerical map of full-size LA and PA individual facial profiles of persons with Stickler syndrome."

Early detection of genetic disorders in minimally affected persons is critical to the department's research



Dr. Saksena's research was supported with funds she received as a 1983 recipient of a five-year Research Career Development Award from the NIH-NIDR.

interests, Dr. Saksena says, because many of the affected person's associated health problems are progressive in nature. She cites Pierre Robin sequence, a significant health problem primarily manifested by micrognathia, cleft palate, glossoptosis, and the absence of a gag reflex: "If, for example, we can identify a woman who has the subclinical features of a gene carrier of Robin syndrome, we can inform her of the risk factors for her children, and help her to be well prepared if a child with the syndrome is born. Children with glossoptosis can die of respiratory problems. They also are candidates for progressive myopia and progressive impairment of locomotion. If children with this disorder have a hearing problem that does not get diagnosed early, they automatically will be years behind the average person in development when the problem is finally detected. One important role of the geneticist and morphometrician is to identify carriers of genetic disorders *early on* so that potential health problems they and their affected offspring may face can be identified and treated as soon as possible."

^{*}Dr. Saksena's co-authors on the first atlas were Dr. Bixler; Dr. Pao-lo Yu, of the IU Department of Medical Genetics (now deceased); and Dr. Geoffrey F. Walker, a former dental faculty member at the University of Michigan.

Dr. Richard E. Ward

*Associate Professor of
Anthropology and
Oral Facial Genetics*

“What’s an anthropologist doing here?” some were asking within the dental school when Dr. Ward came onto the scene in 1985; and anthropologists, when informed of Dr. Ward’s joint appointment to dentistry, sought his dental advice about their own tooth troubles.

■ As a grad student and fledgling in anthropology, Richard Ward entertained youthful visions of a future career in Africa, where he would fill his days discovering human fossils and performing other routinely exotic tasks of a scientist in the field.

As an associate professor and full-fledged anthropologist, Richard Ward has yet to step on African soil, and the clearest vision from his fifth floor office at Cavanaugh Hall is of the sun reflecting off the tops of cars in an IUPUI parking lot. His research discoveries, like those of university professors everywhere, must be squeezed into a tight schedule already crowded with teaching assignments.

But you’ll find tremendous enthusiasm and no disillusionment in Dr. Ward’s assessment of his career path thus far. A graduate of the doctoral program at the University of Colorado and IU’s postdoctoral fellowship program in oral facial genetics, Dr. Ward thrives in the IUPUI classroom environment; his efforts recently were recognized by the IUPUI Office of Faculty Development, which chose him as a 1991 recipient of a Network for Excellence in Teaching grant. He is using the summer grant to develop computer assisted exercises to better convey scientific concepts to students.

Dr. Ward feels especially fortunate to be teaching in a department that encourages his ongoing research ties to the dental school, an association that puzzled more than a few people at first. (“What’s an anthropologist doing *here?*” some were asking within the dental school when Dr. Ward came onto the scene in 1985; and anthropologists, when informed of Dr. Ward’s joint appointment to dentistry, sought his dental advice about their own tooth troubles.)

“But Dr. Bixler has always been aware of the connection between anthropology and dental and medical genetics,” says Dr. Ward. “Anthropologists have in fact had a long and fruitful relationship with dentists and dental schools. Physical anthropology is the branch that deals with physical variations in the human, both past and present. Skeletal studies are a primary component of anthropology, and teeth—the hardest objects in the human body—are most often what is preserved in

fossil deposits. There are people in dentistry who have interests in bone biology and bone structure, the same area of study claimed by anthropologists. And genetics is a natural bridge between the two disciplines.”

Dr. Ward describes the human face as a complicated structure. “It’s like the heart or brain in that a number of elements have to come together just right. Because the face is sensitive to the environment and to intrinsic genetic disruption, it serves as a barometer of those changes. If you see an abnormal or unusual pattern, it can tell you something about what has occurred, and anthropologists are trained to deal with morphometric variation. Human variation is not random—if you have a certain cheek structure, then you’re going to have a certain structure of the underlying tissue that is predictable, and that is reconstructible. Moreover, if you know what the population norms are, you can measure various parameters of the face and get a pretty good idea of what population that person comes from. Medicine and dentistry tend to focus on disease categories, and the anthropologist understands that within any given disease category, affected individuals will fall into a predictable distribution for that disease. However, just as there is no true ‘average’ man or woman, there is probably no average person with Down syndrome or Crouzon syndrome. Each person is a unique individual.”

Dr. Bixler realized that some of the techniques employed by anthropologists could be put to practical use in the dental school’s studies of clefts and syndromes. Specifically, he was interested in Dr. Ward’s knowledge of anthropometry—a mechanism that deals with various measurements of the human body—and numerical taxonomy—a statistical sorting technique that anthropologists use to group fossils into categories and that Dr. Ward logged experience with while preparing a doctoral dissertation on osteogenesis imperfecta (brittle bones).

“Osteogenesis imperfecta is actually many diseases, characterized primarily by poor collagen in the bone,” he says. “Persons affected can have bone fractures two or three hundred times during their life; in some cases the disease leads to severe disfigurement or dwarfing, and the most severe cases

result in neonatal death. It has baffled researchers for a long time because of its range of variation. I used numerical taxonomy to sort individuals with this disease into categories to get an idea of how many different types of diseases had been subsumed under one name."

Dr. Ward's chief discovery during his experience with the project was his growing fascination with medical genetics. During a visiting professorship at

realized there is a unique niche available in this field and I am taking advantage of it."

In the six years he has been associated with the dental school Dr. Ward has used anthropometry to describe facial abnormalities in Beckwith-Wiedemann syndrome, hypohidrotic ectodermal dysplasia, Apert-Crouzon syndrome and other disorders. He also has entered into research collaborations

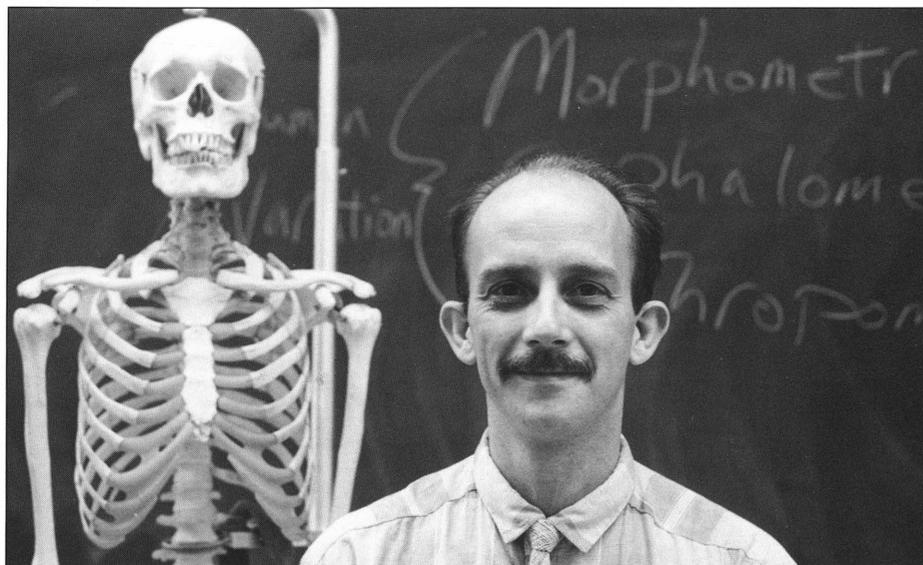
group of parents. What that makes us think is that these parents may have a genetic risk factor that is operating on their faces and predisposing their children to clefts." Their results were published in the *Cleft Palate Journal*.

The department is now trying to see if the same pattern exists in a familial sample. "Dr. Bixler has organized an ambitious molecular research project built around this discovery," Dr. Ward says. "If we can identify people in the familial sample who carry this facial sign of the risk pattern, and we can link that with genetic markers, then we may be on the trail of a major gene causing clefts."

To understand the practical applications of the search for a major gene, which if known would make possible the ability to identify persons carrying the genetic disorder as well as susceptible individuals, Dr. Ward points to the work of other researchers in the country that may make prenatal repairing of clefts possible in the years ahead.

"There are rodent studies under way involving prenatal repairing of clefts," he says. "Rats born with prenatally repaired clefts in these experiments show little scarring or problems that later can disrupt facial growth. A significant proportion of people who come in for genetic counseling do so because someone in their family has a cleft, and a frequent question asked is: Am I going to have a child who's going to have to go through all of those surgeries and problems?" Perhaps some day the geneticists' answer will be "no."

With three decades or more remaining in a career that has already brought him much personal satisfaction, Dr. Ward hasn't ruled out far-flung travels and on-site fossil digs as possibilities for his future. But for now, he's more excited about the research taking place on his own campus. "I constantly pinch myself to think about how lucky I was to find Dr. Bixler and his program. Dave is one of those people who contribute to research by sitting on the edge of a variety of fields and synthesizing from all. He knew—at first better than I—exactly what an anthropologist could contribute to the program."



Dr. Ward and "Fred," an important teaching "assistant" in Dr. Ward's IUPUI courses on human evolution, growth, variation and ecology. Dr. Ward also lectures to first year dental students on dental evolution and works with NIH-funded dental research students in oral facial genetics.

Franklin and Marshall College, Lancaster, Pennsylvania, he met Dr. Steve Levin (now deceased), a researcher at Johns Hopkins University and former student of Dr. Bixler's who pointed Dr. Ward in the direction of Indiana's fellowship program.

Ironically, before his meeting with Dr. Bixler, Dr. Ward had decided there was no place in his research methodology for anthropometry, a measurement system that carries the unpleasant association of a past era, when it was employed by Dr. Samuel Morton and others to classify people into races based on cranial capacity. "That isn't done anymore, but because of those studies I regarded anthropometry as old fashioned and without value to my research interests, which were in statistical analysis," says Dr. Ward. "When Dr. Bixler kept after me to apply anthropometric techniques and cluster analysis to problems in genetics, I admit that I did so reluctantly at first. But over the years I have

with faculty at the University of Toronto Children's Hospital and Jackson Memorial Hospital in Miami, where there is interest in the treatment of children with these disorders.

It was in Dr. Bixler's data on cleft patients that Dr. Ward, using cluster analysis three years ago, uncovered his most startling results thus far and gave a boost to Dr. Bixler's theory that a major gene is involved in clefting. "We were working with parents of sporadic cases, and the conventional wisdom is that these parents shouldn't have anything wrong with them," Dr. Ward explains. "But what we started finding with the multivariate technique was that one group was consistently being defined with unusual facial features, which could be detected by radiographs. Interestingly, just one member of a parental pair had the features. When we looked at a sample of persons with repaired clefts, the facial patterns were nearly identical to those obtained in this one

We Couldn't Do It Without You



Dr. and Mrs. Anthony ('64) Grasso



Dr. Thomas Boardman ('49) with former dental school classmate, Dr. Charles Gish



Dr. Patrick Metro, president-elect of the Ohio Dental Association; Nancy Quinn, and Dr. Gene Brinker

A total of 63,130 donors contributed \$43.8 million in gifts to the Indiana University Foundation in 1990. Many hundreds of those gifts were directed to the School of Dentistry where they are now helping to support and uphold—through a great variety of methods—one of the world's finest and most extensive programs in dental research and education.

On the evening of May 2, Dean H. William Gilmore served as host for a Century Club Celebration at the Hyatt Regency Hotel in downtown Indianapolis—an annual get together that is the IU dental school's way of extending a personal thank you to each member of the alumni and other friends of the school whose generous gifts are invaluable to the growth and development of the dental program. A few of the hundreds of supporters who attended this year's celebration are shown in the following pages.

(All photo identifications left to right)



Dr. Mark ('75) and Kathleen (ASDH '76) Mallatt

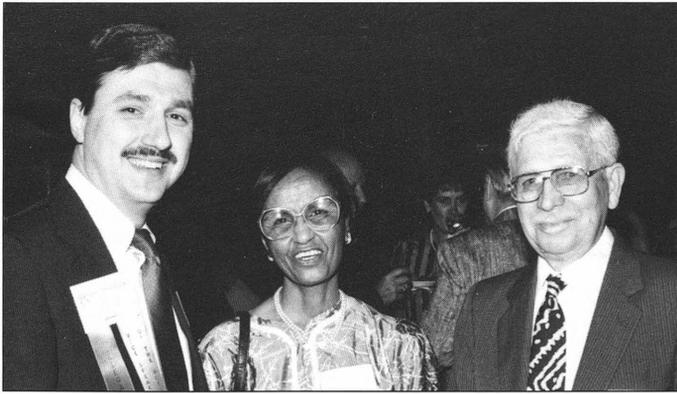


Theresa Swenson, wife of Dr. Henry Swenson, with Elizabeth White (ASDH '60)



Drs. Chet Swimley, Carl Newton ('75), and Brady Hancock (MSD '74)

Photos by Mike Halloran and Susan Crum



Dr. Charles Steffel ('78) with Dr. Hala Henderson ('70) and her husband, Walter



Dr. and Mrs. Lawrence Garetto and Dr. Cecil Brown



Dr. and Mrs. James ('64) Dumas; the Dumases' daughter, fourth-year dental student Jennifer Dahm; her husband, Dr. Mike Dahm; and Dr. Robert Sturm ('46)



Martha Dilger, wife of Dr. Kenneth Dilger ('64); and Mary Schymik, wife of Dr. John Schymik ('65)



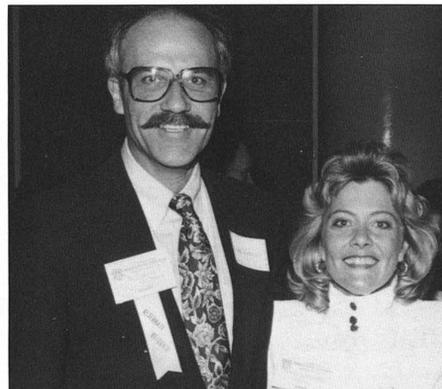
Scott Evenbeck, IUPUI associate vice chancellor of undergraduate education; David Robbins, IUPUI director of budgeting and fiscal affairs; and Robert Martin, IUPUI director of administrative affairs



Dr. David Steele ('70), Dr. Diane Buyer ('82), and her husband, Tim Yale



Dr. and Mrs. William Shonk ('81)



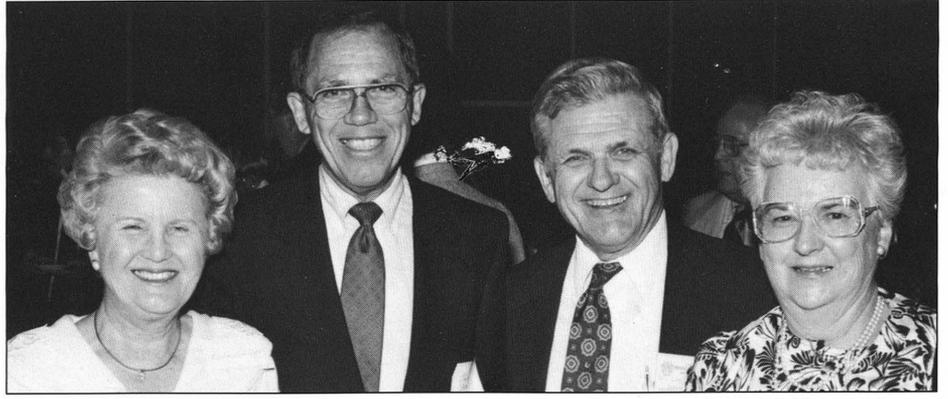
Drs. David Matthews ('79) and Cynthia Molenda ('79)



Drs. Richard Henry ('60) and Monte O'Connor ('60)



Dr. Michael T. Smith ('84) and Virgil Eaton ('55)



Barbara Phillips; Dr. Donald Fread ('54); Barbara's husband, Dr. Lloyd Phillips ('54); and Dr. Fread's wife, Jane



Dr. and Mrs. John ('58) Turchi with son, Kenneth



Dr. Karen Hays ('84) with Drs. Kelly ('84) and Timothy ('83) Lynch



Dr. and Mrs. LaForrest ('57) Garner with Dr. and Mrs. Chris Miller



Dr. Miles Standish ('45) and Paul Starkey ('43)



Dr. Donn Spilman ('61) and son, Jeff (DDS Class of 1991)



Dr. Virginia Crose ('68) and Michael Quinn, of the IDA



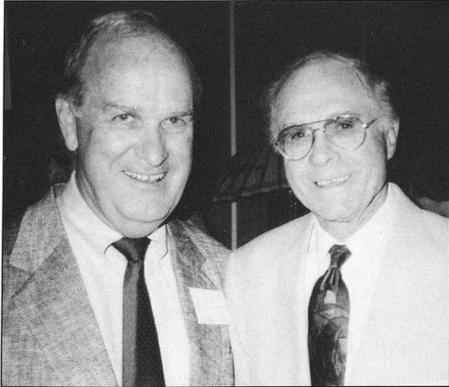
Dr. and Mrs. Stanley ('59) Herman



Gail Williamson (MS '82), Dr. Kelly Lynch ('84), and Dr. Cindy Lindborg ('84)



Dr. David Avery ('66) with Dr. and Mrs. David ('66) Jarrell



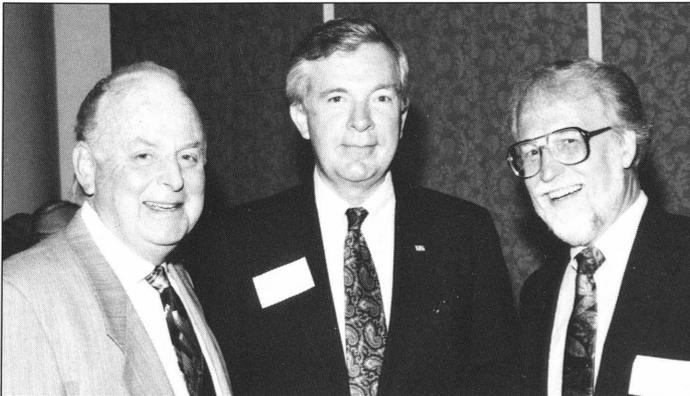
Max Skirvin, of the IU Foundation, and Dr. Willard Damm ('41)



Dr. and Mrs. Rush Bailey



Drs. Henry Swenson and H. William Gilmore ('58)



Drs. Donald Arens ('59), Thomas Mullaney (MSD '65), and Harold Laswell ('61)



Dr. Irvin Kaplan, president of the Ohio Dental Association; Nancy Quinn; and Dr. James Mercer



Dr. and Mrs. Charles ('68) Simons, Dr. William Begeman ('68), and Dr. Richard L. Martin ('66)



Dr. and Mrs. James ('81) Morse



Dr. John Schymik ('65) with Dr. and Mrs. Ed ('57) Fritz



Dr. Lori Kessler ('80), Dr. Albert Cabage ('54), and his daughter, Dr. Carolyn Mills ('83)



Dr. Fredrick Robbins ('64), Deborah Henry, and Dr. Robbins' wife, Caroline (BS '66)



Drs. Gerald Epstein ('52), Jeffrey Dean ('83), and James Weddell ('77)



Drs. Suteera ('81) and Cham Hovijitra



Dr. Lesley Gilbert ('86), Dr. Gary Schinbeckler ('72), Dr. Bob Sexton ('72), and Dr. and Mrs. Charles (MSD '68) Tomich



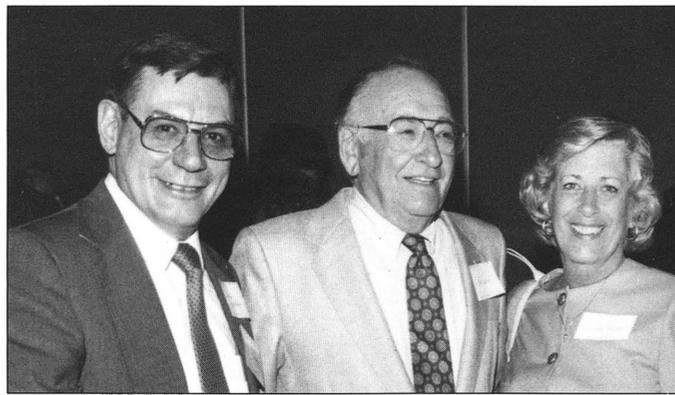
Third-year dental student Chris Gall, Dr. Ray Maddox ('75), and third-year dental student Steve Schimmele with his wife, Heather



Dr. Maynard K. Hine and Dr. Robert Doerr, president of the American College of Dentists



Dr. and Mrs. Sam ('40) Patterson and Sally Klein, wife of Dr. Arthur Klein (MSD '58)



Dr. John Szakaly ('54) with Dr. and Mrs. Robert ('54) Shirey



Dr. and Mrs. Timothy ('78) Carlson



Cindy Lovasko, wife of Dr. Joseph Lovasko ('69); and Lisa Koby Knepper (ASDH '78)



Drs. Martin Linderman ('53) and M. John Borkowski ('55)



Dr. Clyde Parker, Dr. Everett Ringenberg, and Fidelia Risk, wife of Dr. Paul Risk ('59)



Robert Thomalla, Dr. Bruce Raibley ('73), Dr. Tim Turner ('74), and Robert's son, Ken Thomalla



Dr. and Mrs. Donald ('59) Arens, Dr. Bill Hohlt ('62), and Pennie Thomas, wife of Dr. Harvey Thomas ('52)



Mrs. Arlen ('75) Horsewood, Mrs. Lloyd ('66) Hagedorn, and Mrs. Joseph ('75) Jacobi

RONALD MENDENHALL RECEIVES 1ST AWARD FROM ISAAC KNAPP

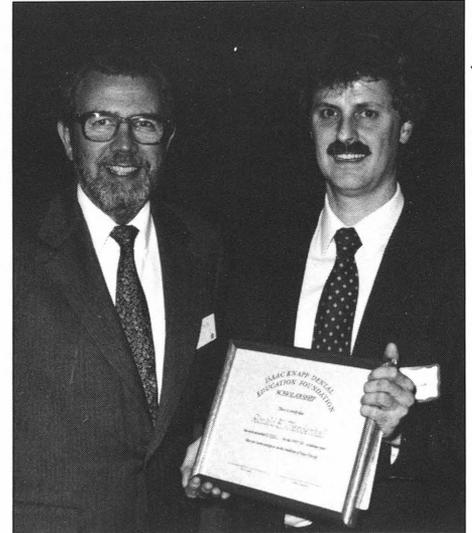
When members of the Isaac Knapp District Dental Society gathered to celebrate the Society's 100th anniversary in April, they did so in grand style: there was a black-tie dinner, an appearance by the president of the American Dental Association, and the announcement of a new scholarship to aid students in their pursuit of a dental education.

The first \$1,000 Isaac Knapp Dental Education Foundation Scholarship was awarded to second-year Indiana University dental student Ronald E. Mendenhall, son of Mr. and Mrs. Eugene Mendenhall, Bluffton. The scholarship was presented by ADA President Eugene J. Truono, of Greenville, Delaware, during the Society's special centennial dinner-meeting at Grand Wayne Center, Fort Wayne.

The award will be applied to Mr. Mendenhall's third year of studies and is renewable in his fourth year. Next spring another recipient will be chosen,



ADA President Eugene Truono (left) congratulates Ronald Mendenhall as recipient of a new scholarship created by the Isaac Knapp Dental Education Foundation.



Foundation treasurer Dr. Jack H. Boyd ('58) and Mr. Mendenhall

Photos by David Bleeke

"The award is really special to me because it comes from people in my hometown area."

Joining in the 100th anniversary celebration are, from left: Jan Bleeke, wife of Dr. David A. Bleeke ('64); Dr. H. William Gilmore ('58), dean of the IU dental school; Dr. Don E. Lahrman ('57); Patsy Dumas and her husband, Dr. James E. Dumas ('64), Foundation president.



thereby fulfilling the Society's goal of funding two dental student scholarships annually—one for third year students and one for fourth year.

"Being the first to receive this scholarship is fantastic," Mr. Mendenhall said recently. "The award is really special to me because it comes from people in my hometown area. It was very nice to attend the celebration and meet everyone who made this scholarship possible."

"We are pleased and grateful that Isaac Knapp District Dental Society has chosen to recognize students of dentistry through the creation of this scholarship," said Dr. Hala Z. Henderson, IU associate dean for student affairs. "Isaac Knapp is a very active sponsor of a number of important community programs, so it's not surprising that they have chosen to add this activity to an already strong program. We are very proud that Ron is the first recipient—he's an excellent student!"

To be eligible, scholarship candidates must demonstrate their affiliation with one of 10 counties within the Isaac Knapp District Dental Society area: Adams, Allen, DeKalb, Huntington, Jay, LaGrange, Noble, Steuben, Wells, and Whitley.

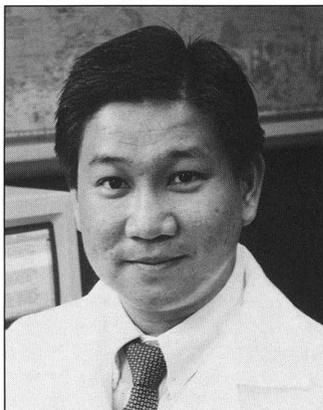
The Society's presiding officers for 1990-91 were Dr. Joseph W. Hake—president, Huntington; and Fort Wayne members Dr. James A. Shupe ('62), president-elect; Dr. Eugene A. Alter ('67), secretary; and Dr. Keith E. Yoder ('63), treasurer.

Postdoctoral Profiles



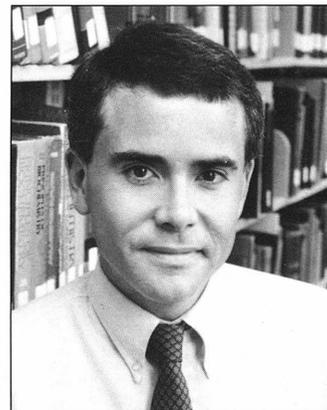
Jeffrey A. Colligan

Hometown: Glen Carbon, Illinois; **Dental degree:** DMD, Southern Illinois University, 1988; **Postgraduate program at IU:** periodontics (major), oral pathology (minor); **Thesis:** *SEM comparison of effects of instrument sharpening upon root surfaces*; **Degree:** MSD, May 1991; **Plans:** Private practice in East Alton, Illinois, and part-time instructor at SIU.



Chiu-kwan Poon

Hometown: Taichung, Taiwan; **Dental degree:** BDS, National Defense Medical Center, 1981; **Postgraduate program at IU:** dental diagnostic sciences (major), oral pathology (minor); **Thesis:** *Effects of epidermal growth factor on wound healing of rat oral mucosa*; **Degree:** MS, June 1991; **Plans:** Return to current position as an attending oral and maxillofacial surgeon at Taichung Veterans General Hospital, and also serve as acting director of the Hospital's section of oral diagnosis and oral medicine.



Mike Child

Hometown: Lexington, Kentucky; **Dental degree:** DMD, University of Kentucky, 1988; **Postgraduate program at IU:** orthodontics (major), speech pathology (minor); **Thesis:** *Early detection of dietary-induced periodontal bone loss and the effect of flurbiprofen administration in the Syrian hamster*; **Degree:** MSD, May 1991; **Plans:** Private practice in Lexington.

Photos by Susan Crum

IU School of Dentistry
**CONTINUING
 EDUCATION
 CALENDAR**

(all courses held in Indianapolis unless otherwise stated)

September 4

CE-129 Advanced Periodontic Series for Dentists—Oral Hygiene Procedures
Dr. E. Brady Hancock, IU chairman of periodontics, and staff

September 11

CE-129 Adv. Periodontic Series—Scaling and Root Planing Procedures
Dr. Brady Hancock and staff

September 13

CE-130 IUSD Practice Management Personal Finance Study Club—Alternative Personnel Benefit Programs
Bart Kaufman, Attorney at Law, Kaufman Financial Corp., Indianapolis

September 17

CE-131 Advanced Endodontic Series for Dentists—Anatomy and Access Preparation
Dr. Carl Newton, IU chairman of endodontics

September 19—21

CE-132 Fall Dental Alumni Conference (Open House); Table Clinics and Poster Displays
Presented by IU dental school faculty representing 14 departments

September 24

CE-131 Adv. Endodontic Series—Differential Diagnosis of Periapical Pathology
Dr. Lawrence Goldblatt, IU professor of oral pathology

September 25

CE-129 Adv. Periodontic Series—Prognosis of the Periodontally Involved Tooth and Arch
Dr. Brady Hancock and staff

September 28

CE-133 Current Esthetic Restorative Trends: How, When, and Why
Dr. Ronald Feinman, Atlanta, Georgia

October 2,3

CE-134 Implants: The Science, Surgery and Prosthetic Demands for Dentists. Phase I: An Overview of

Dental Implantology

Dr. Jack Hahn, Midwest Implant Institute, Cincinnati, Ohio; Dr. Lawrence Garetto, IU department of orthodontics; and Dr. Bill Lacefield, University of Alabama, Birmingham

October 2

CE-135 A Team Approach to the Management of Medical Emergencies in the Dental Office
Dr. James Swift, University of Minnesota, Minneapolis

October 8

CE-131 Adv. Endodontic Series—Preparation of Root Canal Space
Dr. Carl Newton

October 9

CE-129 Adv. Periodontic Series—Comprehensive Treatment Planning for the Periodontal Patient
Dr. Brady Hancock and staff

October 15

CE-131 Adv. Endodontic Series—Obturation of Root Canal Space
Dr. Carl Newton

October 16

CE-136 Successful Strategies for Oral Hygiene Care of the High Risk Patient
Dr. Charles Nelson, IU chairman of oral and maxillofacial surgery

October 16

CE-137 Radiology for Dental Personnel (Lecture)
Dr. Thomas Razmus and Prof. Gail Williamson, IU dept. of dental diagnostic sciences

October 17—19

CE-138 Graduate Course in Head and Neck Anatomy, Part I: Lecture and Prosection Course (contact IUSD C.E. office for information regarding educational prerequisites)
Faculty of Lille University Medical School, Lille, France: Manuel Chanavaz, MD, DDS, chairman of implantology and maxillofacial reconstruction, under the section of Professor Michel Donazzan; and Jean-Paul Francke, MD, PhD, chairman of anatomy

October 19

CE-137 Radiology for Dental Personnel (Laboratory)
Dr. Thomas Razmus and Prof. Gail Williamson

October 18—21

CE-139 AGD Hoosier Concept 90's and Beyond: Review of April 1991 Restorative Dentistry Course
Dr. Michael Cochran, IU chairman of operative dentistry, and staff (Oct. 18);

and Endodontic Procedures
Dr. Carl Newton and staff (Oct. 19-21)

October 22—24

CE-134 Implants, Phase IIa: Evaluation, Interpretation and Selection of Implant Systems
Endosteal Blades (Dr. Charles Weiss, New York City); Branemark Systems (Dr. Mats Henningson, University of Gothenburg, Sweden); IMZ Implant Systems (Dr. Paul Mentag, University of Detroit); Somer Laboratory (Larry Sowinski, Indianapolis); Core Vent (Ruth Ott, Chicago); and Stryker Implant Systems (Dr. Joseph Mitchell, Columbus, Ohio)

October 25

CE-140 Hemophilia Conference
Dr. Sol Silverman, Jr., chairman of oral medicine, University of California at San Francisco; Dr. Donald Marianos, Centers for Disease Control, Atlanta, Georgia; Dr. Judith Deutsch, IU dept. of medicine and director, Midwest AIDS Training and Education Center; Dr. Amy Shapiro, IU depts. of pediatrics/hematology-oncology (School of Medicine); Dr. Carol McKown, IU dept. of pediatric dentistry (School of Dentistry); and Janet Mulherin, Indiana Hemophilia Comprehensive Center

October 29

CE-131 Adv. Endodontic Series—Restoration of Endodontically Treated Teeth
Dr. Michael Cochran

November 2

CE-141 CPR: Basic Life Support for Dentists and Auxiliaries
Roberta Hilderbrand, IU dept. of periodontics

November 7—9

CE-142 Branemark Surgical Training Program (Prerequisite: practice limited to oral and maxillofacial surgery or periodontics)

Dr. Charles Nelson; Dr. Brady Hancock; Dr. Charles Goodacre, IU chairman of prosthodontics; Dr. David Brown, IU dept. of prosthodontics; Dr. W. Eugene Roberts, IU chairman of orthodontics; and Meaghan Resholt, Nobelpharma USA, Inc., Chicago

November 8

CE-143 IDA/IUSD Academy of Continuing Education Fall 1991 Program: Newer Concepts in the Management of TMJ Disorders

Dr. Daniel Laskin, Medical College of Virginia, Richmond

November 12—14

CE-134 Implants, Phase IIb: Evaluation, Interpretation and Selection of Implant Systems

Dr. Boyd Harris and Daniel Root, designers of Harris-Root O-Ring Mandibular Subperiosteal Technique, Fayetteville, Arkansas; Dell Dine and Pete Murphy, Ito & Koby Dental Studio Inc., Indianapolis; Dr. Charles Nelson; and Dr. Anton Wetzell, Berne, Switzerland

November 13

CE-144 Creating a Patient-Centered Practice

Jennifer de St. Georges, Monte Sereno, California

November 19

CE-131 Adv. Endodontic Series—Management of Traumatized Teeth
Dr. Kenneth Spolnik, IU dept. of endodontics

November 20

CE-129 Adv. Periodontic Series—Reevaluation After Initial Therapy
Dr. Brady Hancock

November 26

CE-131 Adv. Endodontic Series—Evaluation of Success and Failure; Retreatment
Dr. Carl Newton

December 3,4

CE-134 Implants, Phase III: Diagnosis and Clinical Practice in Implants

Dr. Charles Nelson and Dr. David Brown

December 4

CE-145 Diagnosis, Treatment and Management of the HIV Positive Patient

Dr. John Valentine, IU dept. of dental diagnostic sciences

December 5

CE-131 Adv. Endodontic Series—Posterior Workshop

Dr. Carl Newton and staff (prerequisites are CE-131 course dates: Sept. 17, Oct. 8 and 15, and Nov. 26)

December 6

CE-146 IUSD Practice Management Personal Finance Study Club—The Inevitable Does Not Have to Be a Full Blown Trial

Rodney Taylor, Christopher & Taylor Attorneys at Law, Indianapolis

December 12

CE-131 Adv. Endodontic Series—Posterior Workshop continued

December 19

CE-131 Adv. Endodontic Series—Posterior Workshop continued

January 8

Radiology for Dental Personnel (Lecture)

Dr. Thomas Razmus and Prof. Gail Williamson

January 9—11

CE-148 Graduate Course in Head and Neck Anatomy, Part II: Cadaver Dissection Course (CE-138 Part I is prerequisite)

Drs. Manuel Chanavaz and Jean-Paul Francke

January 17—25

CE-150 Caribbean Cruise—IU Alumni Trip. Course: Current Concepts in Periodontal Therapy, presented by Dr. Robert Lockhart, IU dept. of periodontics

Embark from San Juan, Puerto Rico; dock at 7 islands. Brochures available upon request—call (317) 274-7782.

January 18

CE-149 Asepsis and Sterilization

Kathy Stern, RDH, American Association of Dental Examiners, Indialantic, Florida

February 1

Advanced Anterior/Posterior Porcelain Veneering: A 1992 Update of the Cosmetic Triad

Dr. Edward Walk, Boston

February 6—8

Annual PGA Conference, West Palm Beach, Florida

February 14

Current Concepts in Adhesives, Non-Metallic Restorations

Dr. Ronald Jordan, University of Winnipeg, Canada

March 13

Management Strategies for the Office Team

Sally McKenzie, McKenzie Management Co., Columbus, Ohio

March 18

CE-155 Maintenance of the Implant-treated Patient: The Expanding Role of the Hygienist

Dr. R. Lamont MacNeil, University of Michigan, and Dr. David Alexander, IU dept. of periodontics

April 15

CE-158 Motivating a Patient Through Effective Communication

Dr. Robert Lockhart, IU director of student professional development

For more information about courses and registration, write to Dr. Donald E. Arens, Director of Continuing Education, 1121 West Michigan St., Indianapolis, IN 46202; or call Ms. Sandy Manion (317)274-7782.

DAE Around Indiana

Fort Wayne Honors Program Spotlights 7 Hygiene Grads

Photos by Robin Feeley



Ingrid Churchill-Ochoa (l) and Kristina Weber



From left: Tamara Lickey, Elaine Foley, and Elizabeth Linn



From left: Lisa Ketcham, Norma Alberson, and Diane Williams



Susan Webb (l) and Angela Keller



Susan Webb (l) and Mailene Soyster



From left: Elizabeth Linn, Mary Cooper, and Amy Meyer

The Dental Hygiene Program at Indiana-Purdue University at Fort Wayne honored this year's class of 22 graduates during a recognition ceremony on April 29. Each graduate received a lavender carnation from her "Little Sis" from the first-year class. Some 100 friends and family members of the graduates, faculty, staff, and students attended the honors program.

The following awards were presented to outstanding graduates:

Ruth White Award to Norma Alberson. Presenters: Diane Williams (ASDH '69), president, Auxiliary to the Isaac Knapp Dental Society; and Lisa Ketcham (ASDLT '76), chair, Ruth White Award Committee

Sigma Phi Alpha Honor Society membership to Tamara Lickey and Elizabeth Linn. Presenter: Elaine Foley, chair, Dental Hygiene Program

Gloria H. Huxoll Award to Tamara Lickey. Presenters: Mrs. Huxoll, assistant professor emeritus; and Jacqueline Heine, assistant professor

Hu-Friedy Golden Scaler Award to Elizabeth Linn and Amy Meyer. Presenter: Mary Cooper, assistant professor

Maynard K. Hine Award for Radiology to Tamara Lickey. Presenter: Prof. Cooper

A. Rebekah Fisk Award to Kristina Weber. Presenter: Ingrid Churchill-Ochoa (ASDH '80)

Oral Pathology Award to Tamara Lickey. Presenter: Dr. Timothy Shambaugh, oral and maxillofacial surgeon and oral pathology instructor

Dental Materials Award to Elizabeth Linn. Presenter: Dr. Jeffrey Platt, dentist and dental materials instructor

Goodbye to Prof. Francis

Mike Halloran



Jeri Francis at her farewell reception

Professor Jeri Lee Francis resigned from her position as an assistant professor of dental assisting at the IU School of Dentistry on May 10, 1991. She had devoted 20 years of outstanding service to the school.

A 1965 dental assisting graduate of the Wood School, Jeri began her IU career as a dental assistant in undergraduate pediatric dentistry in 1971, then transferred to the graduate division. She earned an IU dental assisting certificate in 1975, and in 1983 became a full-time faculty member in dental assisting. While working full time, Jeri completed an IU bachelor's degree in health occupations education, graduating with distinction in 1982.

For 10 years Jeri helped hundreds of dental auxiliaries master expanded functions and placement of temporary crowns through her work as an instructor in one of IUSD's best known weekend continuing education courses. She is also the author of several articles

appearing in state and national dental journals.

Jeri was honored in April as her many friends at the School of Dentistry gathered for an afternoon reception to recognize her years of achievement and to wish her well on her way to a new career—that of being a full-time wife to her husband, Paul, and mother to their two daughters, Alex, 4, and Tori, 14 months.

Jeri's dedication and loyalty to her work will be missed not only by the faculty, but by the many staff members and dental assisting graduates with whom she worked very closely through the years.

We wish her the very best as she journeys through life, guiding and directing her family's future. As her daughter Alex might say: "My mommy stays home with us now!"

*Pauline R. Spencer
Director of Dental Assisting*

(continued from previous page)

Isaac Knapp Dental Hygiene Education Award to Angela Keller. Presenter: Susan Webb (ASDH '88), president, Isaac Knapp Dental Hygienists' Association

Isaac Knapp Dental Hygienists' Association Scholarship to Mailene Soyster. Presenter: Ms. Webb.

*Elaine S. Foley
Supervisor
Dental Hygiene*

C.E. Courses for Dental Hygienists

In response to the recent action of the 1991 Indiana Legislature requiring dental hygienists to complete a specific number of continuing education hours in a two-year licensing period, Indiana University School of Dentistry is offering five quality courses over the next 12 months. These two- to three-hour programs are specifically designed for the dental hygienist and are being offered at times that we feel are convenient to most office schedules.

The IUSD Department of Continuing Education hopes the following programs will serve your needs. We look forward to your attendance.

(For names of presenters, refer to the

C.E. calendar beginning on page 22 of this publication.)

Oct. 16: Successful Strategies for Oral Hygiene Care for the High Risk Patient

Dec. 4: Diagnosis, Treatment and Management of the HIV Positive Patient

Jan. 18: Asepsis and Sterilization

March 18: Maintenance of the Implant-Treated Patient

April 15: Motivating a Patient Through Effective Communication

*Donald E. Arens, Director
IUSD Continuing Education*

End of the Year Wrap-up from IU—South Bend

The 16th Annual Dental Hygiene Alumni Day was held in March at Morris Park Country Club. Guest speakers Pam Borden (ASDH '80), of ICI Pharma, and Kim Eastman Porter (ASDH '83), of K.P. Dental Retipping Service, addressed the reunion classes of 1986, 1981, 1976 and 1971. The class of 1976 dedicated its reunion to the memory of classmate Carol Dee Minichillo. Special reunion guests included the following recipients of academic excellence awards: Cherie Nannfeldt, Debra Rhodes, Karen Green, Deborah Buell—all members of the dental hygiene class of 1991—and first-year student Dessa Sullivan.

Dessa Sullivan also received the Indiana Dental Hygienists' Association Scholarship at the IDHA luncheon in May. The Association awards one scholarship to a first-year student who is selected from one of the five Indiana dental hygiene programs. Dessa was a student delegate at the annual session.

The 1991-92 campaign for the North Central Dental Society-IUSB Dental Assisting Grant concluded with a total of \$4,870. The grant was established by the Society in 1986 for qualified IUSB dental assisting students.

The IUSB division of dental assisting thanks the following contributors to this important fund:

Drs. Robert Allen, Jeffrey and Douglas Badell, Harry Bailie, Douglas Bateman, Larry Beachy, Ralph Berman, Bonni Boone, James Buzalski, Terry Cunningham, James Davis II, Gary Drury, Brian Eberhart, Gilbert Eberhart, Eugene Geyer, William Gitlin, Wesley Good, Michael Griffee, John Harrington, Charles Hassel, Jane Heyde, William Kimbriel, David Lehman, John Lehman, Jr., Jerry Lentz, D. Robert Lindborg, Vance Lopp, Shant Markarian, Ronald Melser, Dennis Miller, Sam Miller, Edward Molenda, William Mull, Richard Myers, Edward Packard, John and Marjorie Reuthe, Wayne Risinger, Gregory Robbins, Larry Roberts, Thomas Rykovich, Paul Sergio, Donn Spilman, Richard Strait, Gene Stutsman,

George Surguy, John Szakaly, Howard Wiesjahn II, and Gregory Winteregg.

*Shant Markarian
Director
Dental Auxiliary Education*



Photo on left: Elkhart resident Gayle Cook (ASDH '91) receives the Elkhart Dental Auxiliary Award from Alice Cravens during ceremonies held in Elcona Country Club in Elkhart on May 9. Gayle, who is a graduate of IU-South Bend's part-time dental hygiene program, was honored for outstanding achievement, including her participation in a smokeless tobacco education project she helped to develop and present to Elkhart public school children. Photo on right: Gayle and Deanne Jaeckel (ASDH '90), of Mishawaka. With a loan from the Elkhart Dental Auxiliary, Deanne and Paula Sahagun (ASDH '90), also an IU-South Bend graduate, were given the opportunity to work last summer as dental hygienists in the Colorado migrant worker program. (Photos and information submitted by Jennifer A. Klein, assistant professor of dental hygiene, IU-South Bend)



Northwest Students Recognized during Spring Programs

At IU-Northwest we ended the 1991 school year with much to be proud of. In May our students participated in table clinic, paper, and poster contests in Indianapolis. Dena Clark, a dental assisting student, was runner-up in the poster contest for her project on infection control. Receiving a fourth-place award for their table clinic entitled "DDS Versus MD in a Surgical Setting" were Class of 1992 dental hygiene students Melissa Bridegroom, Julie Clinkenbeard, Denise Langham, and Tricia Monzka.

Also in May, two of our faculty members were elected to office in the Indiana Dental Assistants Association. Audra Peterson (certificate '87) was

elected treasurer and Lynn Wilson (certificate '86) secretary.

We had a celebratory and very emotional graduation ceremony on May 11, with Dr. Richard Jones ('75) addressing the issue of "Quality of Professionalism" during his speech. Among the many awards bestowed at graduation were two given for professionalism—one presented to dental assisting graduate Heather Holman and the other to dental hygiene graduate Victoria Fancher.

*Michele E. Hernandez
Recruitment/Admissions Officer
and Part-time Instructor
Dental Auxiliary Education*

With the Classes...



Dr. James and Ama Huckelberry receive congratulations from Gerald L. Bepko, IU vice president and chancellor, Indianapolis. The Maynard K. Hine Medal was cast in 1974 to honor the first chancellor of IUPUI. (Dr. Hine also served as IU dental dean from 1945 to 1968.)

Dr. Huckelberry Honored at IUPUI Leadership Dinner

Dr. James W. Huckelberry ('24) was one of three persons receiving a Maynard K. Hine Medal last spring for "significant contributions to Indiana University-Purdue University at Indianapolis."

The Medals were presented during the Indiana University Alumni Association's 18th Annual IUPUI Alumni Leadership Dinner, held at University Place Hotel on March 28. Other recipients were Martha Schmidt Hollingsworth (JD '72), an Indianapolis lawyer and former president of the IU School of Law—Indianapolis Alumni Association; and Dr. George T. Lukemeyer (MD '47), professor emeritus of medicine, School of Medicine, who helped establish Indiana's first kidney dialysis unit and later helped develop the state's first kidney transplant program.

Dr. Huckelberry was recognized for devoting "his entire life to the advancement of the dentistry profession," including 55 years as a general practitioner in Indianapolis. President of the IUSD Alumni Association in 1941-42,

Dr. Huckelberry inaugurated the first Fall Dental Conference and has been an ardent participant of the annual event for nearly five decades. Dr. Huckelberry was also an Indiana Dental Association pioneer in working with the IU dental school and the Indiana State Board of Health to establish guidelines on the dental health care needs of persons in Indiana's state hospitals, correctional centers, and other institutions; he continues to serve as consultant to the IDA Council on State Institutions.

Avid supporters of the IU School of Dentistry, Dr. Huckelberry and his wife, Ama, presented the school with a major contribution in 1986 that was used to refurbish the patient admitting and assignment area of the dental diagnostic sciences department.

Gerrit Hagman Extends Invitation

IUSD alumnus Dr. Gerrit C. Hagman, of Atlanta, Georgia has been elected president of the Thomas P. Hinman Dental Society for 1991-92. "I welcome all IUSD alumni to attend the next Hinman meeting, to be held here in Atlanta—the 1996 'Olympic City'—March 13-16, 1992," Dr. Hagman wrote to us recently. The meeting will take place at the At-

H.G. Thomas Receives IDA Service Award

Citing his 38 years of commitment to the field of dentistry, the Indiana Dental Association bestowed the prestigious Distinguished Service Award upon Dr. Harvey G. Thomas ('52), of Muncie, during the IDA's 133rd annual session in May.

Dr. Thomas was also recognized as one of the prime motivators behind the Huffer Memorial Children's Center, a facility in Muncie dedicated to the care and education of children of all races. He has written a book about the center entitled *Ida Isanogel Huffer Memorial: A Legacy of Love—An Energy of Life*.

Dr. Thomas served as IDA president in 1984. He and his wife, Pennie, are active participants of IU alumni affairs. Dr. Thomas received the IUSD Alumni Association's Distinguished Alumnus Award in 1987.



Dr. Thomas (right) with Dr. Gerry L. Kaufman ('67), IDA president

Mike Halloran

lanta Inforum and Peachtree Plaza. Dr. Hagman is a 1961 dental graduate who completed the master's degree program in periodontics in 1963. For more information about the Hinman meeting, write to Dr. Hagman c/o Buckhead Medical Building, Ste. 330, 3312 Piedmont Road, N.E., Atlanta, GA 30305.

AAPD Session Dedicated to Ralph McDonald

The American Academy of Pediatric Dentistry dedicated its 1991 annual session to one of its founding members—Dr. Ralph E. McDonald ('44), IU professor emeritus of pediatric dentistry and former dean of the IU School of Dentistry.

The 44th annual session, held in San Antonio, Texas, May 24-28, honored Dr. McDonald as a “pre-eminent leader, administrator, teacher, author, and clinician.”

Dr. McDonald's lifelong achievements in pediatric dentistry include service as president of the Academy and a seven-year stint as editor-in-chief of the AAPD journal, *Pediatric Dentistry* (1983-1990).

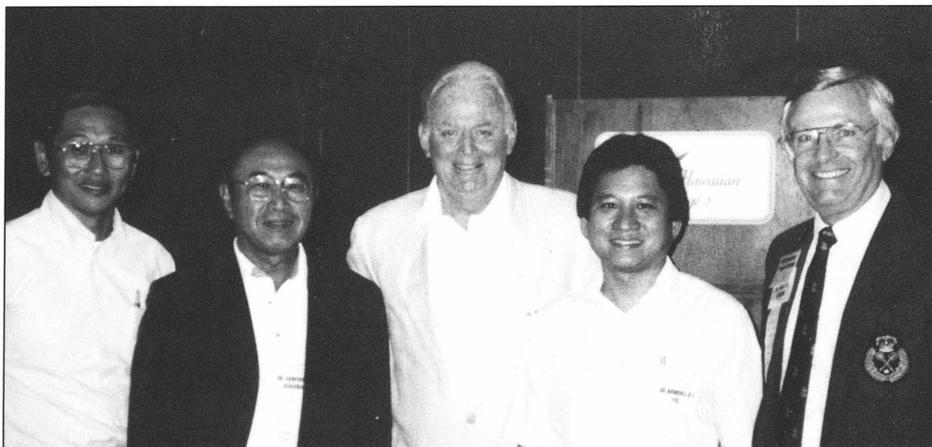
Dr. McDonald is also a past president of the American Society of Dentistry for Children. He is the author of the widely respected textbook, *Dentistry for the Child and Adolescent*, now in its fifth edition.

Dean of the IU dental school from 1968 to 1985, Dr. McDonald also served as longtime director of the Dental Clinic at Riley Hospital for Children on the IU Medical Center and chaired the IU Department of Pediatric Dentistry from 1953 to 1968.

Louisiana Elects Jack Cassingham to Presidency

Dr. R. Jack Cassingham ('58), New Orleans, was elected president-elect of the Louisiana Dental Association (LDA) at the 111th annual session held in Lafayette on April 6, 1991. Dr. Cassingham is professor of periodontics at Louisiana State University. He also maintains a part-time practice limited to periodontics.

Dr. Cassingham served as president of the New Orleans Dental Association in 1982. Active in organized dentistry for many years, he has served on many committees and on the Board of Direc-



Hellos from Honolulu. When Dr. Donald E. Arens ('59) addressed the Hawaii Dental Association at the annual meeting in Honolulu in January, several of IU's Hawaii-based alumni were there to make IUSD's Director of Continuing Education feel right at home. From left: Dr. Wallace F. Chong, Jr. ('65), Dr. Sanford S. Asahina ('53), Dr. Arens, Dr. Randall D.J. Yee ('79), and Dr. Ernest W. Scheerer, Jr. ('61). Dr. Arens, who is also an associate professor of endodontics, presented a program entitled “Endodontic Pain Control: Who's to Blame?”

tors of the LDA. He completed three years as LDA secretary-treasurer before the April election. He has been an alternate delegate to the American Dental Association for several years and is an ADA delegate for 1991-92. He currently is serving the second year of a four-year term on the ADA's Council on Dental Therapeutics.

Dr. Cassingham is a Fellow of the International and American colleges of dentists and a member of Pierre Fauchard Academy, Omicron Kappa Upsilon dental honor society, C. Edmund Kells Honorary Society, and the American Academy of Periodontology. He is a diplomate of the American Board of Periodontology.

For the first decade of his career Dr. Cassingham conducted a solo practice in general dentistry in Hillsboro and Kokomo, Indiana. In 1970 he earned an MSD degree in periodontics from Indiana University.

Dr. Cassingham is married to the former Mary Louise Holt of Kokomo, and is the father of four sons: Dr. Scott F.; Capt. Jack H.; Guy H.; and Lee J.

1916

Dr. Ermal C. Baker, Indianapolis, died May 30, 1991. Dr. Baker began practicing in 1918 in Kentland, then moved to Indianapolis six years later. He retired in 1978. He was a Marine Corps veteran and a former teacher at the IU dental school.

1926

Dr. Harold C. Dimmich, 1010 Cumberland-509, West Lafayette, IN 47906, writes that he has owned for many years an antique dental model, given to him by Dr. William E. Walker, a Fowler, Indiana, dentist (now deceased) who graduated with the Indiana Dental College Class of 1896. The demonstration model is an upper denture typo-dont marked 1895; it is cast in full gold with only a full pink vulcanite labial around the entire denture, not artistically carved. Attached in the vulcanite are 14 teeth, including two bridges with four teeth each. Dr. Dimmich says that the model is complete and in good condition. “I've never seen another like it. No near-modern ideas or construction is in evidence.”

Dr. Dimmich has also had a note from Dr. Charles A. Seal, by way of Dr. Seal's granddaughter, Vicki Marsh, who says that her grandparents are still living at home in Columbus, Indiana, and continue to get around fairly well.

Dr. Earl Keiser, Nathan Home, Marble Hill, MO 63734, recently wrote the IU Alumni Association that he is still able to get around without a cane, although it's getting harder to

do so. "Takes more of an effort, otherwise I am in good health for my years," says Dr. Keiser, who turned 96 on March 27. He would like to get in touch with his remaining classmates.

1927

Dr. Delmar R. Faun, Colfax, reports that Dr. Maurice L. Ferguson, Michigan City, died April 9, 1991.

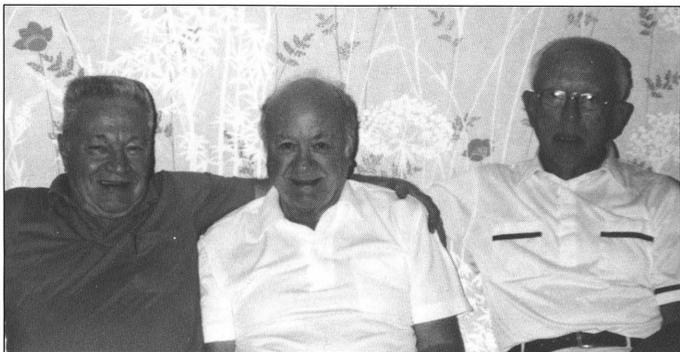
Dr. Ferguson was born in Dugger, and had practiced in Michigan City from 1928 until his retirement in 1979. In 1934 he married Madeline E. Johnson, who died in 1982. Dr. Ferguson was a member of Scottish Rite, South Bend; Orak Shrine; Acme Lodge 83, F. & A.M.; Royal Order of Jesters; Elks Lodge 432; and LaPorte Shrine Club. He was one of the founding members of the Michigan City Yacht Club and a past president of the Lions Club.

Dr. Ferguson is survived by a son, Samuel L. Ferguson, Michigan City; two daughters, Sandra Jackson, Wellesley, Massachusetts, and Susan Hanson, New Brighton, Minnesota; six grandchildren; and one great-grandchild.

1934

Dr. Samuel L. Border, of Monon and North Forth Myers, Florida, died May 28, 1991. He had practiced for 44 years in Monon and Francesville, retiring in 1978. Dr. Border was the widower of Ignota White Border. He is survived by his wife, Carmen; sons, Dr. William R. Border ('61) and Dr. John F. Border; and five grandchildren.

1939



Three members of the IUSD Class of 1939 and an "Honorary Member"—IUSD Dean Emeritus Ralph E. McDonald ('44)—met recently for lunch in Dr. Dale W. Harvey's home on Sanibel Island in Florida. Left to right are John L. Campbell, Sr., of Sun City Center, Florida, and Terra Alta, West Virginia; Dale Harvey; and James R. Davis, Mishawaka. Dr. Campbell was formerly chairman of the Department of Oral and Maxillofacial Surgery at the University of West Virginia. Both Dr. Harvey and Dr. Davis, before their retirement, served as members of the Indiana State Board of Dental Examiners.

1940

Dr. Frank K. Etter, 1709 Roscomare Road, Los Angeles, California, reports that Dr. Gus Metaxas, Mountain View, California, died March 6, 1991, after a sudden illness. His survivors include a daughter, Barbara Metaxas, of Utah; and two sisters in Indiana.

1950

Address: Dr. Marvin E. Baxla, Route 1, Box 338, Warrensville, NC 28693

1952

Dr. Norbert J. Buechler, Apache Junction, Arizona, died April 10, 1991, of natural causes. He was retired. Dr. Buechler was born in Ferdinand, Idaho, and lived in South Bend for 24 years. In 1946 he married Mary Seufert, who preceded him in death by seven years. Dr. Buechler was a veteran of World War II. He is survived by two daughters, Sue Stack of Indianapolis and Mary Beth Kapsa of South Bend; a son, Mark, of Phoenix; and four grandchildren.

1954

Dr. Allen E. English, South Bend, died February 15, 1991.

1956

Address: Dr. George B. Robinson, 3942—58th Circle, Vero Beach, FL 32966

1961

Address: Dr. Darryl C. Harris, 2804 West Palisades Parkway, Muncie, IN 47303-9311

1962

Address: Dr. Rodger Alan Martin, RR#2, Box 422, Morgantown, IN 46160

1966

Drs. Norman O. Krauss and Timothy O. Krauss ('89) announce the relocation of their office in the prac-

tice of general dentistry to 8307 West Tenth Street, Indianapolis, IN 46234.

Address: Mary L. Kochert (ASDH), 6409 Dorsey Lane, Tempe, AZ 85283

1970

A nice letter arrived from Dr. and Mrs. Pete Yancich shortly before they moved from Hinesville, Georgia:

Thank you for the funny story of Steve Keiser's toothbrush journey that appeared in the Winter '91 Bulletin. I wonder what happened to my toothbrush? My wife, Karen, graduated from Community College, El Paso, Texas (dental hygiene '83), and her toothbrush is somewhere in Korea.

I have enclosed a mailing label to help in the change of our address, effective June, 1991: LTC (P) Peter P. Yancich, 10 MED. DET. (D.S.), APO SF 96301. This address will be for two years.

We continue to enjoy alumni news and feel part of Indiana wherever we go.

1972

Address: Dr. Brank B. DeBruhl, 4573 East State Road 236, Middletown, IN 47356

1973

We have a belated report from the IU Alumni Association that Dr. Miles M. Shepard, Seattle, Washington, died in October, 1990.

1977

Address: Barbara M. Dean (ASDH), 4926 Cherryhill Court, Indianapolis, IN 46254-7549

1978

Address: Dr. Wade B. Anshutz, 7990 Marblehead Court, Terre Haute, IN 47802

1979

Address: Kathy D. Johnson (ASDLT), 23435 Cammack Road, Cicero, IN 46034

1980

Address: Capt. Michael T. Hanst (MSD), 29016 Beauclair Drive, Tavares, FL 32778

1982

Michigan Street Memos

Addresses: Dr. Carol Beckert (pediatric dentistry certificate), 1155 East Lawn Lake, Troy, MI 48098

Dr. Jill Jones Gentry, 131 Minges Circle, Battle Creek, MI 49015

1983

Addresses: Dr. Jeffrey A. Dean, 4926 Cherryhill Court, Indianapolis, IN 46254-7549

Dr. Philip A. Gentry, 131 Minges Circle, Battle Creek, MI 49015

Christine T. Herbst (ASDH), 4202N 500E, Rolling Prairie, IN 46371

1986

Dr. Jeffrey Miller is associating with Drs. Anthony Chidalek ('52), Andrew Serafin ('68) and Scott Martinsen ('77) at 1011 Michigan Avenue in LaPorte.

1987

A note from Dr. Joseph G. Mastey, 1046 Sawyer Street, Shawano, WI 54166, who says in part:

I'm still with the U.S. Public Health Service, Indian Health Service (it's the Menominee Indian Tribe up here). Things are going quite well—except for the mosquitoes. In addition to bloodsucking, the Wisconsin variety are so bad they pick on small birds, too.

Address: Carol Hinz Sawyer (ASDH), 33 Jordan Street, Skaneateles, NY 13152-1119

1989

Drs. Timothy O. Krauss and Norman O. Krauss ('66) announce the relocation of their office in the practice of general dentistry to 8307 West Tenth Street, Indianapolis, IN 46234



Susan Crum

Retreat to Indy. University of Kentucky dental dean David A. Nash and members of his faculty stopped by the Indiana University dental school to tour the building and visit their associates "to the north" during a UK spring retreat held in Indianapolis in May. Among the group were two IU grads (seated, from left)—Dr. Thomas Mullaney (MSD '65), chair, department of oral health practice; and Dr. Harold Laswell (DDS '61), head of patient care program. Others pictured are, from left: Dr. Lawrence Goldblatt, IU associate dean for academic affairs and for graduate and postgraduate education; UK faculty Dr. Gerald Roth, head of research and graduate studies program, and Dr. Thomas Lillich, chair, oral health science; Dr. Hala Henderson, IU associate dean for student affairs; Dean Nash; UK faculty Dr. Raynor Mullins, head of education program, and Dr. Gene Lewis, head of public and professional service program; and IU dental dean H. William Gilmore.

Honor Societies Welcome New Members

Eleven students at Indiana University School of Dentistry were inducted into national honor societies for dentistry and dental hygiene during the annual awards program for Theta Theta Chapter of Omicron Kappa Upsilon (dentistry) and Theta Chapter of Sigma Phi Alpha (dental hygiene), held April 26 in the IUPUI Union Building.

New OKU alumni members are Grant S. Bailey, Julie A. Boyd, Steven A. Douglas, Sung H. (Stacey) Lee, Charles A. Sadler, Jr., Amy J. Viano, and Sherri L. Wilson. Ms. Boyd was also chosen as OKU's Outstanding Student for 1991. New Sigma Phi Alpha alumnae are Donna L. Hutton, Donna L. Krietenstein, Kathleen M. Quinn, and Patricia A. Smith.

Others recognized during the banquet included Dr. Carl J. Andres, associate professor of prosthodontics (new OKU faculty member); Louise M. Judd, clinical assistant professor of dental hygiene (new Sigma Phi Alpha faculty member); James R. Levens, assistant dean and director, administrative and financial affairs (OKU honorary member); Dr. Francis E. McCormick, professor emeritus of pediatric dentistry (OKU life member); and Susan E. Draheim, third-year dental student (William S. Kramer award, named for former OKU national president and presented to undergraduate students for demonstrating scholarship, character, and potential for advancement in dentistry).

Presiding over the banquet were OKU President David K. Hennon (DDS '60) and Sigma Phi Alpha President Rosemary Howard (ASDH '83).



New OKU members, from left: Amy Viano, Charles Sadler, Sherri Wilson, Steven Douglas, Stacey Lee, Grant Bailey, and Julie Boyd



New Sigma Phi Alpha members, from left: Kathleen Quinn, Patricia Smith, Donna Hutton, and Donna Krietenstein

Photos by Mike Halloran

Trees from Japan Given as Symbol of IU-MDC Friendship

On May 14, officials of Indiana University and Matsumoto Dental College, Shiojiri, Nagano, Japan, participated in a brief ceremony at the IU dental school as a symbolic gesture of an agreement of friendship that was signed by the two schools five and a half years ago.

Matsumoto representative Takuma Takayama and Dr. Hiroshi Yagasaki, son of Dr. Yasushi Yagasaki, founder and president of Matsumoto Dental College, presented Dean H. William Gilmore with a gift of 171 seedlings from Japan, including Japanese Buckeye, Japanese White Birch, Mountain Cherry, Japanese Maple, and Keaki. The trees have been transported to IU's nursery in Bloomington, where they will be cared for until university landscapers decide how the seedlings can be used in the dental school's ongoing beautification project. Others participating in the ceremony included IUSD faculty members Dr. Donald R. Tharp, associate dean for clinical affairs, and Dr. Hala Z. Henderson, associate dean for student affairs; and Emily C. Wren, IUPUI director of campus facility services.

With an interest in promoting research and other scholarly activity between Matsumoto and IU, a number of faculty and student exchange visits have taken place over the years. Dr. Hiroshi Yagasaki has been a visiting scholar in IU's department of dental diagnostic sciences since 1989. For the first time the exchange program was brought to the pre-doctoral level last summer, when seven IU dental students fulfilled extramural graduation requirements by spending a week in observation at Matsumoto Dental College.



Tim Hill

Takuma Takayama (left) presents 50 Japanese Maple seedlings to Dean H. William Gilmore as part of the total gift of 171 trees.

Update on National Board Pilot Part II

In his *Alumni Bulletin* article on the National Boards Examinations (Reflections from a Former Chairman of the Boards—spring '91 issue), IU faculty member Dr. Lawrence I. Goldblatt discussed the Joint Commission's pilot for a new Part II of the boards, which was tested at almost every dental school in the country last November. Having promised us an update after the Commission evaluated the results of the pilot, Dr. Goldblatt is pleased to report that the pilot was deemed a success. The Joint Commission has approved

implementation of the comprehensive National Board Dental Examination Part II beginning December 1992—the date originally targeted for the change. “We’re satisfied that all of the principal goals of the new format have been met,” says Dr. Goldblatt, who will soon complete a four-year term on the Commission, including a stint as chairman (1989-90). “In addition to 600 individual questions making up Component A of the exam, there will be 150 Component B questions based on clinical case presentations similar to those presented in the pilot.” The new test has been designed to elicit answers that represent clinically mature judgments on the part of the candidate rather than rote-memorized material.

IUSD Graduates Saluted on Honors Day '91

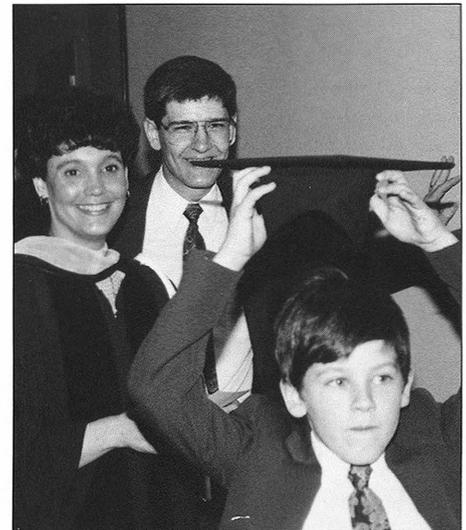
47 awards were bestowed upon 40 graduates during ceremonies held at the Indiana Convention Center prior to IUPUI Commencement exercises on May 12. A list of graduates recognized during Honors Day and at other ceremonies held this spring follows.

On behalf of the IU School of Dentistry's faculty, staff, and undergraduate students, the Alumni Bulletin extends hearty congratulations and best wishes to each 1991 graduate.

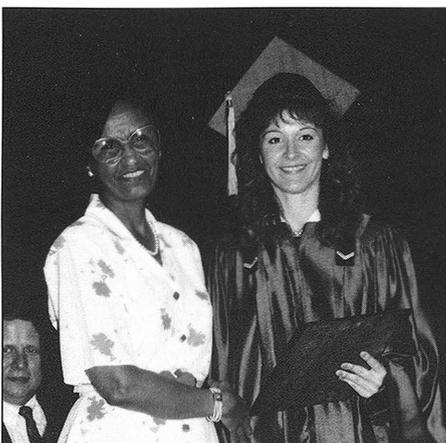
Photos by Mike Halloran



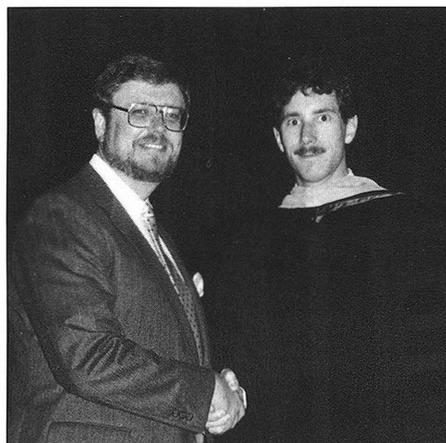
Class of '91 colleagues, from left: Anthony Puntillo, David Durell, Brian Wagoner, John Keller, Randy Young, Stacey Lee, Fanny Rovira, Sangyoung Lee, Noel Garcia, Michael Maze, and Jeffrey Nelson.



Taking mom's graduation cap for a pilot test is eight-year-old Austin Wilson, son of dental graduate Sherri Wilson and her husband, Clark.



Cherisse Moore receives Harriett F. Hine alumni association award from Dr. Hala Henderson.



Dr. Michael Cochran presents American Academy of Gold Foil Operators Award to Steven Salkeld.



Alex Mishel masters placement of robe and hood under the watchful eye of his dad, Mike Mishel.

Graduating with High Distinction:

Doctor of Dental Surgery

Julie A. Boyd
Sherri L. Wilson

Associate of Science, Dental Hygiene

Theresa A. Evans
Donna L. Hutton
Diana A. Morse

Graduating with Distinction:

Doctor of Dental Surgery

Grant S. Bailey
Steven A. Douglas
Sung H. (Stacey) Lee
Charles A. Sadler, Jr.
Amy J. Viano

Associate of Science, Dental Hygiene

Patricia A. Smith



International College of Dentists Award recipient Scott Reef and presenter, Dr. Lloyd Phillips



Lisa Lloyd, president of the Dental Assisting Class, says farewell during her address to the Honors Day audience.



Dentsply International Merit Award is presented by Dr. John Borkowski to Lisa Shideler Feit.

(ASDH Candidates)

Kristine M. Browning

IUSD Dr. Tillman E. Miller Clinical Achievement Award (1st place)

Presented by Dr. Donald R. Tharp, associate dean for clinical affairs

JoAnn Cardwell and Virginia L. Hodgkin

Johnson Public Health Dental Hygiene Scholarship Awards; established by Dr. Donald W. Johnson ('56) in memory of his parents, Frank and Jessie Johnson.

Presented by Professor Evelyn R. Oldsen, director of dental hygiene program

Jennifer A. Crane

A. Rebekah Fisk Memorial Award of the Indiana Dental Hygienists' Association; named for IU's first director of dental hygiene who died in 1982.

Presented by Professor Oldsen

Donna L. Krietenstein

IUSD Dr. Tillman E. Miller Clinical Achievement Award (2nd place); named for 1980 IUSD dental graduate and

Elkhart practitioner who died in 1990; established by Dr. Miller's family and friends.

Presented by Dr. Tharp

Kimberly L. Lawson and Amanda L. Mattingly

Rossya Kaufman Memorial Awards in Dental Hygiene; named for 1958 graduate of IU's dental hygiene program and established in 1960 in her memory.

Presented by Professor Oldsen

Cherisse D. Moore

Procter & Gamble Prevention Award; established by Procter & Gamble Co.

Presented by Professor Oldsen

IUSD Alumni Association's Harriett F. Hine Award

(selected by peers); named for the late wife of Dr. Maynard K. Hine, IUPUI chancellor emeritus and former dean of the IU School of Dentistry.

Presented by Dr. Hala Z. Henderson, associate dean for student affairs

Lynn E. Rodda

Hu-Friedy Golden Scaler Award; named for a dental manufacturing company

Presented by Professor Oldsen

Kathleen M. Quinn, Jennifer A. Crane, Heather R. Roth, and Catherine A. Deck

Table Clinic Award for "Is Your Back Biting Back?"

Presented by Charles J. Palenik, professor of oral microbiology

Lynn E. Rodda, Toulou Kounelis, Donna L. Hutton, and Donna L. Krietenstein

Procter & Gamble Table Clinic Award for "Fluoridated Water: the Hidden Prevention"

Presented by Professor Palenik

(Candidates for Dental Assisting Certificates)

Carolyn J. Story

Harriett F. Hine Academic Award

Presented by Professor Pauline R. Spencer, director of dental assisting program

Angela L. Baker

Clinical Achievement Award

Presented by Professor Spencer

Holly J. McQuinn, Toni M. McDonald, Wendy S. Snow, and LeeAnn Lane

Table Clinic Award for "Special Care for Special Kids"

Presented by Professor Palenik

(DDS Candidates)

Julie A. Boyd

American Academy of Oral Medicine Award

Presented by Dr. Steven L. Bricker, chairman of dental diagnostic sciences

American Academy of Oral Pathology Award

Presented by Dr. Charles E. Tomich, chairman of oral pathology

(awards presented to Julie Boyd continued)

American Academy of Periodontology Award

Presented by Dr. E. Brady Hancock, chairman of periodontics

Alpha Omega Dental Fraternity Scholarship Award

Presented by Dr. Lawrence I. Goldblatt, associate dean for academic affairs and former president of Indiana Chapter of Alpha Omega

Jack D. Carr Memorial Award for maintaining highest grade point average; named for prominent Indianapolis dentist and dental professor who died in 1986 and established by his family.

Presented by Dr. H. William Gilmore, dean of dentistry



Dr. Charles Nelson bestows the American Association of Oral and Maxillofacial Surgeons Award upon Robert Reifeis.

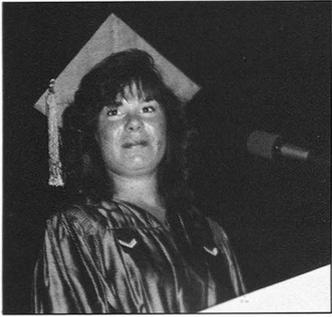


Professor Pauline Spencer congratulates Harriett F. Hine Academic Award recipient Carolyn Story.



Big smiles from Hu-Friedy Golden Scaler Award recipient Lynn Rodda and presenter, Professor Oldsen

Dental hygiene class president Sharon Sondgerath offers parting remarks during honors program.



Block Drug Company Essay winner Lis Cloys with presenter, Professor Charles Palenik



Professor Evelyn Oldsen presents Johnson Public Health Dental Hygiene Scholarship Awards to Virginia Hodgkin (center) and JoAnn Cardwell.



Dental assisting grad Jeanette Williams



(Boyd awards continued)

John F. Johnston Award for proficiency in fixed and removable partial prosthodontics. Named for 1921 graduate of the Indiana Dental College, pioneer in prosthodontics, and former head of fixed and removable partial prosthodontics at IU. Dr. Johnston died in 1977. Award established and presented by Dr. M. John Borkowski ('55), an Indianapolis practitioner and part-time assistant professor of prosthodontics.

Quintessence Publishing Company Award for clinical achievement in restorative dentistry
Presented by Dr. Michael A. Cochran, chairman of operative dentistry

Pierre Fauchard Academy Indiana Section Award for clinical excellence; presented during the Academy's annual meeting, Indiana Convention Center, Indianapolis, May 2.

Chancellor's Scholar Award, presented to IUPUI students from each school or division during the IUPUI Chancellor's Honors Convocation, University Conference Center, April 19

Lisbeth A. Cloys

Block Drug Company's Essay Award, 1st place, "Here Today, Gum Tomorrow: The Historical Development, Folklore and Social History of Chewing Gum"
Presented by Professor Palenik

Jay E. Cowan

Glenn J. Pell Award presented by the Indiana Society of Oral and Maxillofacial Surgeons; named for a pioneer of oral and maxillofacial surgery who was a 1912 graduate of Indiana Dental College and longtime faculty member at IDC and IUSD. He died in 1954.
Presented by Dr. Charles L. Nelson, chairman of oral and maxillofacial surgery

Lisa Shideler Feit

Indiana Society of Periodontists Award
Presented by Dr. Hancock

Dentsply International Merit Award for outstanding achievement in removable prosthodontics; named for dental manufacturing company.
Presented by Dr. Borkowski

Michael J. Gerstbauer

Block Drug Company's Essay Award, second place, "A Case Analysis of Saethre-Chotzen Syndrome"
Presented by Professor Palenik

Jeffery L. Gore

Indiana Dental Association Award
Presented by Dr. Edward C. Fox, Richmond dentist and IDA vice president

IUSD Alumni Association's Maynard K. Hine Award
Presented by Dr. Henderson

IUSD Non-Academic Staff Council Student Recognition Award
Presented by Cindy L. Anderson, administrative secretary in prosthodontics

American College of Dentists Indiana Section Award; presented during College's annual banquet at Hyatt Regency Hotel, Indianapolis, May 2.



Balancing Act. Dental hygiene graduate Amanda Mattingly helps a classmate steady her cap and tassel.

Valerie Haughtington

American Society of Dentistry for Children Certificate of Merit and Indiana Chapter Award
Presented by Dr. David R. Avery, chairman of pediatric dentistry

John B. Keller

Indianapolis General Dentistry Study Club Award
Presented by Dr. Christianne J. Guba, director of Advanced Education in General Dentistry program

Sung H. (Stacey) Lee

Table Clinic Award, 1st place for "Periapical Cysts"; given by Indianapolis District Dental Society
Presented by Professor Palenik

Jeffrey D. Nelson

Block Drug Company's Essay Award, 3rd place for "Effect of Diabetes Mellitus on the Prevalence and Severity of Periodontal Disease"
Presented by Professor Palenik

Anthony M. Puntillo

American Association of Orthodontists Award
Presented by Dr. William F. Hohlt, director of undergraduate orthodontics

Douglas L. Ramsey

American Association of Endodontists Award
Presented by Dr. Carl W. Newton, chairman of endodontics

Academy of Dental Materials Award

Presented by Dr. Mark W. Beatty, assistant scientist in dental materials

Scott A. Reef

International College of Dentists Award
Presented by Dr. Lloyd J. Phillips ('54), Indianapolis dentist and president-elect of the USA Section of the ICD

Robert L. Reifeis, Jr.

American Association of Oral and Maxillofacial Surgeons Award
Presented by Dr. Nelson

Charles A. Sadler, Jr.

Quintessence Publishing Company Award for achievement in research
Presented by Dr. Cochran

Steven C. Salkeld

American Academy of Gold Foil Operators Award
Presented by Dr. Cochran

Jeffery A. Spilman

Academy of Operative Dentistry Award
Presented by Dr. Cochran

IUSD Dr. Tillman E. Miller Clinical Achievement Award

Presented by Dr. Tharp

Amy J. Viano

Academy of General Dentistry and Indiana Chapter Award
Presented by Dr. Ronald K. Bowman ('61), Indianapolis dentists and AGD regional vice president

American Association of Women Dentists Award

Presented by Dr. Henderson

Brian D. Wagoner

American Equilibration Society Achievement Award for outstanding performance relating to the science of occlusion and temporomandibular joint function
Presented by Dr. Borkowski

James L. Maus Memorial Scholarship Award; established by the Maus family and named in memory of owner and operator of Maus and Elam Dental Laboratories.

Presented by Dean Gilmore

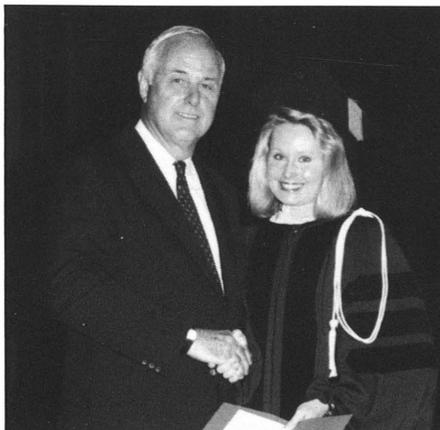
Quintessence Publishing Company Award for clinical achievement in periodontics

Presented by Dr. Cochran

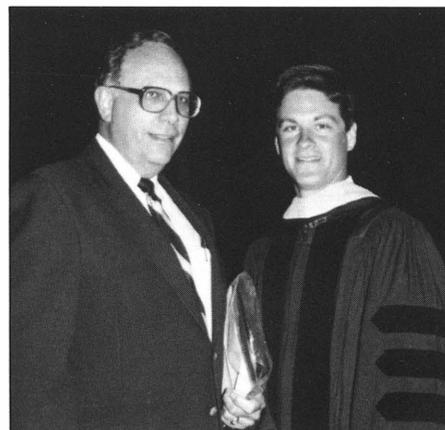
Sherri L. Wilson

American Academy of Oral and Maxillofacial Radiology Award

Presented by Dr. Bricker



Julie Boyd accepts the Jack D. Carr Memorial Award from Dean H. William Gilmore.



Dental class president Jeffery Gore receives the Indiana Dental Association Award, presented by Dr. Edward Fox.

***Pioneer, Teacher, Friend:
IUSD Faculty, Staff,
Students and Alumni
Mourn Loss of Ralph Phillips***

The international dental community lost a renowned scientist, author, and lecturer—and the IU School of Dentistry lost an extraordinary teacher and friend—with the death of Dr. Ralph W. Phillips on May 17, 1991.

Dr. Phillips, who was for decades one of the world's foremost authorities in the field of dental materials science, held the distinguished rank of Research Professor Emeritus of Dental Materials at Indiana University School of Dentistry. He died in Indianapolis at the age of 73. Dr. Phillips is survived by his wife, Dorothy E. McCleaster Phillips; a daughter, Cheryl P. Dale; and two grandchildren.



***Ralph W. Phillips
1918—1991***

Throughout an eminent career that spanned 50 years, Dr. Phillips was widely recognized as one of the most dynamic and sought after lecturers in dentistry; he appeared on more than 1,000 programs in the United States and elsewhere around the world. He organized and chaired more than 40 symposiums and conferences related to biomaterials and dental research.

“Dr. Phillips was in great demand as a speaker because of his ability to analyze scientific advances in dental science and apply them to office procedures,” says Dr. Maynard K. Hine, IUPUI chancellor emeritus and former dean of the IU School of Dentistry.

Dr. Phillips was born in Farmland, Indiana, and raised in Salem, Indiana. He joined the Indiana University faculty soon after earning an IU bachelor's degree in chemistry in 1940. He also held a Master of Science degree (IU '50) and two Doctor of Science degrees (University of Alabama '60, McGill University '88).

When he was first recruited by Indiana University to help develop a dental materials program in the '40s, Dr. Phillips designed and built most of the equipment himself. In addition to chairing the department of dental materials for several decades, he was appointed Indiana University's first associate dean for dental research and served for a time as director of IU's Oral Health Research Institute. He was the 1987 recipient of the IU School of Dentistry Alumni Association's Distinguished Faculty Award.

As a pioneer in research Dr. Phillips was one of the first

to investigate the relationship between laboratory tests and clinical performance. He initiated clinical investigations designed to evaluate the effect of the oral environment upon restorative materials and to determine the efficacy of newer formulations and techniques of usage. As others began to recognize the importance of this approach, clinical investigation of materials became an essential component of all meaningful research programs in the discipline. Over the years Dr. Phillips remained faithful to his original philosophy of focusing upon the clinical applications of laboratory findings—an approach that dominated both his teaching style and research activities.

Dr. Phillips was also at the forefront in recognizing that the first consideration for clinical success of a material lies not with its physical properties but with its compatibility—assuring safety to the dentist in handling and safety to the patient in terms of pulp and tissue response and systemic effects.

Dr. Phillips' award-winning studies of the influence of fluoride solutions on the acid solubility and hardness of enamel were instrumental in the acceptance of fluoride therapy. He also recognized, and demonstrated through a number of experiments, that fluoride could be added to restorative materials to increase their anticariogenicity.

In the 1960s Dr. Phillips coordinated the first workshop on adhesive dental materials, bringing together scientists with special knowledge in the area of adhesion, polymers and tooth structure. Recommendations from that workshop and the published proceedings triggered an avalanche of interest and research in the field. In the following years he co-chaired two more workshops, and for the first time a collaborative research program was established between the National Institutes of Health and profit-making institutions to implement investigations of adhesive dental materials. The monitoring committee for reviewing research in this area was chaired by Dr. Phillips for the six years of its existence.

A prolific author, Dr. Phillips wrote more than 300 scientific papers and books, including his major work, *The Science of Dental Materials*, which has been one of the most widely used and translated dental textbooks in history. Dr. Phillips had recently completed the ninth edition, which was

published in March 1991. He also served on the editorial board of a number of professional journals and was editor of the Indiana University School of Dentistry *Alumni Bulletin* for a remarkable 43 years.

“Perhaps Dr. Phillips’ most important contributions were in supervising graduate student research,” says Dr. Hine. “His reputation in dental materials attracted students and visiting researchers from all parts of the globe, and today graduates of his program are scattered throughout the world.”

He was a former chairman of the Bio-Materials Research Advisory Committee for the National Institute of Dental Research, and of the Dental Panel of the Food and Drug Administration. He had been a consultant to the U.S. Public Health Service, the National Academy of Sciences, and the U.S. surgeon general.

Dr. Phillips was a former president of the International Association for Dental Research and was a fellow of the American and International colleges of dentists.

The recipient of many awards and honors, he held a Gold Medal Award from the Pierre Fauchard Academy; a Callahan Gold Medal Award from the Ohio Dental Association; a William J. Gies Award from the American College of Dentists; and a Wilmer Souder Award from the International Association for Dental Research.

Equally important to the praise he received worldwide is the respect Dr. Phillips earned from those who worked with him day by day back home in Indiana. “He made my job easy and interesting—and he was a wonderful storyteller, too,” says Edith A. Gladson, Dr. Phillips’ administrative secretary for nearly two decades. Edith assisted in the preparation of manuscripts and textbooks, maintained Dr. Phillips’ research index, and coordinated his correspondence with colleagues who numbered in the thousands. “He wrote to people all over the world and in every state in the country,” Edith says. “After all these years I feel as if many of these people are my friends, too, even though I’ve never met them. Dr. Phillips was the greatest—there will never be another one like him.”



Research teamwork that lasted 40 years. Dr. Phillips with Marjorie L. Swartz, whose career at IU was launched as Dr. Phillips’ research assistant in the late ’40s.



“After 40 years of working with Ralph, what can I say? He was fun—he was stimulating, and he had a great sense of humor,” Marjorie Swartz, professor emeritus of dental materials, said recently. She was appointed chair of dental materials when Dr. Phillips relinquished the post in 1988. Professor Swartz retired last summer. “Ralph was very supportive of his employees, and he was always aware that the buck stopped with him. In short, he was a great guy!”

In Nineteen Hundred and Ninety-Two San Juan's Beaches Will Beckon You

An invitation from Indiana University alumnus Dr. Augusto R. Elias Boneta (MSD '75),
president of the Puerto Rico Dental Association:

August, 1991

Dear Indiana University Alumni,

Wouldn't it be nice to exchange a few days of the harsh, cold winter for a few in the warm, sunny Caribbean?

You can do so if you join us in San Juan, Puerto Rico, for the next Puerto Rico Dental Association's Annual Session, to be held January 15-19, 1992, at the luxurious Caribe Hilton Hotel.

Since our association's 76th annual meeting coincides with the 500th anniversary of the discovery of the Americas, we are planning a very special event. With the theme, "Dentistry—Present and Future Horizons," we will look ahead to the Year 2000 by opening our session with a lively discussion by a panel of experts representing authorities in dentistry from the United States, Mexico, Venezuela, Colombia, Brasil, Cuba, Costa Rica, Dominican Republic, and Puerto Rico. Dr. George K. Stookey, Indiana University associate dean for dental research and director of the Oral Health Research Institute, will participate on the panel.

A group of distinguished speakers will present state-of-the-art information on diverse dental topics. Participants from the Indiana University faculty will include Dr. Michael A. Cochran, chairman of operative dentistry; Dr. E. Brady Hancock, chairman of periodontics; Dr. Eugene Roberts, chairman of orthodontics; Dr. Charles J. Goodacre, chairman of prosthodontics; and Dr. Bradley B. Beiswanger, associate director of clinical research at the Oral Health Research Institute.

Every participant is welcome to present a table clinic or poster on January 16. If you wish to be a presenter, please contact Dr. Santiago Surrillo (DDS '87) at the address below by December 15, 1991.

In addition to professional enrichment, we offer you a chance to celebrate five centuries of culture, enjoy a warm sun in January, feast on international cuisine, dabble in exciting night life, catch up with old friends (many IU alums reside here)—or just plain relax! Whatever your reason for coming, please don't miss this unique opportunity to visit Puerto Rico—the Shining Star of the Caribbean.

For more information regarding the program, write to Dr. Jaime de Jesús Viñas, chairman of the Annual Session, c/o the Puerto Rico Dental Association, Domenech 200, Hato Rey, PR 00918, or call 809/764-1969.

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This issue in memory of
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School of Dentistry
Alumni Bulletin
1943-1986

