

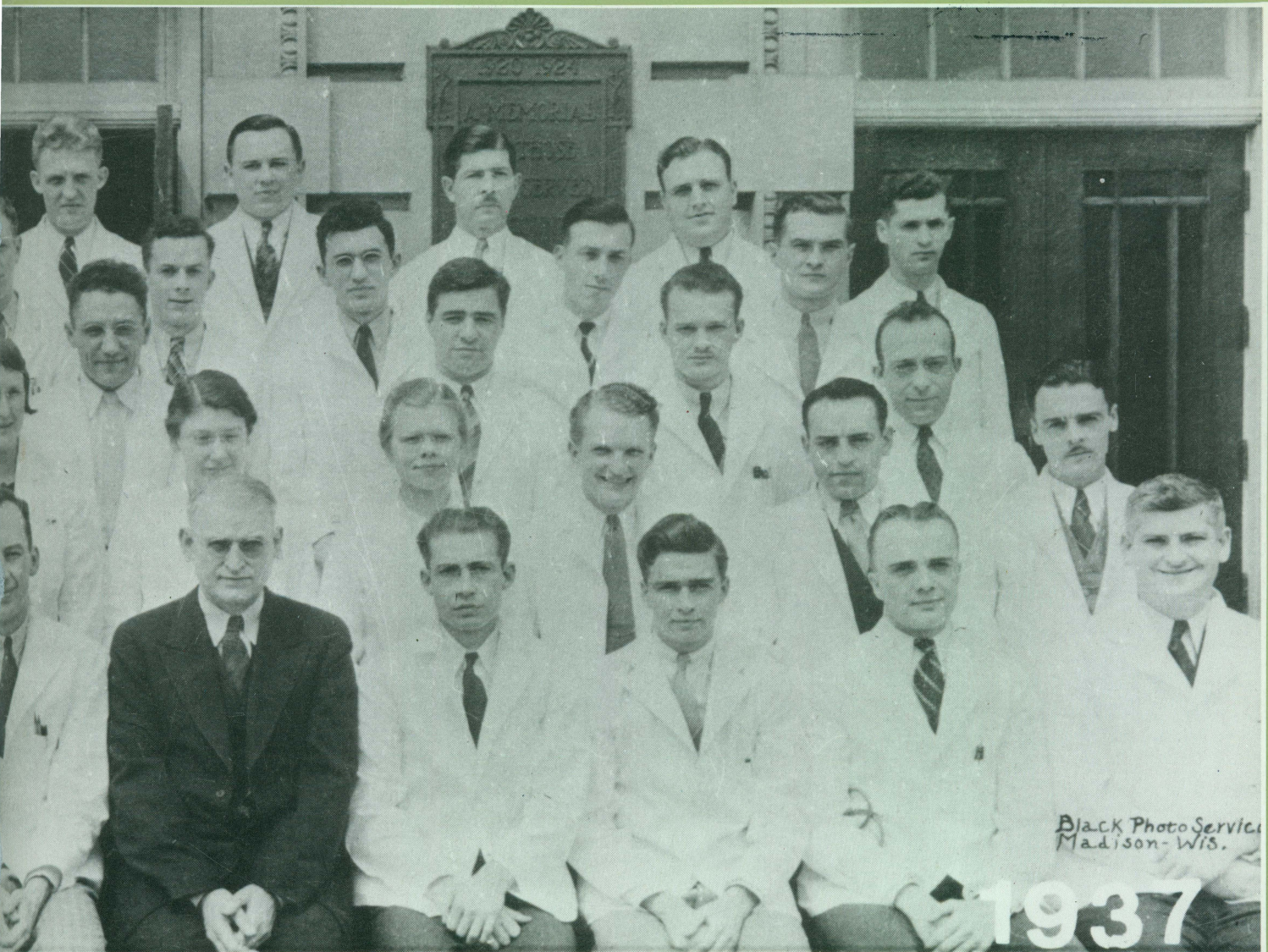
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Wisconsin Medical Alumni

Quarterly

volume 27—number two—spring 1987

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CONTENTS

Medical Alumni Day 1987	1
Spouses' Reception	2
Mary Zupanc Elected to Outstanding Women of America	2
Dilly's Finest—A Tribute to Ben Lawton Wayne J. Boulanger	3
Medical Alumni Citation Recipients	4
1987 Emeritus Faculty Awards	7
The Department of Neurophysiology	10
President's Column	20
Walter R. Schwartz	
Dean's Column	21
Arnold L. Brown	
Editor's Column	22
Vic S. Falk	
Interim Report—Annual Fund Campaign	23
Medical Education Day	24
Distinguished Service Award —Milwaukee Winter Meeting	25
Slate of Officers and Directors	28
Medical School News	30
Faculty News	32
Alumni Capsules	35
Our Readers Write	38
Coming Events	39
Continuing Medical Education	40

COVER: Class of 1937 (left to right)

Bottom Row—Stehr, Harper, Bingham, Reinardy, Hammes, Pyre, Schmidt, McMahon, Lowry, Frost, Holman.
 Second Row—Slater, Dasler, Regner, Dickie, Hayden, Church, Warne, Shafer, Longley, Sazama, Drury.
 Third Row—Doolittle, Carney, Gulbrandsen, Smith, Evans, Lalich, Frisch, Sames, Richter.
 Fourth Row—Greenstein, Langhus, Glenn, Shaw, Gerhardt, Rogers, Owen, Schlossmann, Gorman, Miller, Cohn.
 Top Row—Grindell, Burgess, Dancy, Kroncke, Schroder, Burek, Walsh, Rankin. Selmer Feld not in picture.

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MEDICAL ALUMNI DAY

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Pre-Alumni Day Activities May 14

Post-50th Reunion Dinner
Madison Club
5 East Wilson Street

Alumni Who Have Already Celebrated Their 50th Reunion,
All Emeritus Faculty, Award Recipients, Representatives and
Members of the Board of Directors

Alumni Day May 15

Morning

- | | | | |
|-----------|---|------------|--|
| 8:30 a.m. | Registration—Continental Breakfast
Medical Sciences Center
1300 University Avenue
NOTE: Spouses reception and program
on the changing role of women.
Wisconsin Center, 9:00 a.m. to
11:30 a.m. | 10 a.m. | Dean's Report |
| 9:30 a.m. | Annual Business Meeting
Medical Alumni Hall
Room 227 SMI | 10:20 a.m. | Scientific Program
Chairman of the Department of
Ophthalmology, John Chandler '65, will
moderate a program highlighting some
of the exciting clinically relevant
research programs in Ophthalmology. |
| 9:45 a.m. | President's Report | 11:50 a.m. | Charter buses to the Wisconsin Center
702 Langdon Street |

Afternoon

- | | |
|------------|--|
| 12 noon | Wine Reception
Wisconsin Center Alumni Lounge
Alumni and Spouses |
| 12:30 p.m. | Luncheon With Spouses
Presentation of 50 year medallions to
'37 class
Awards for annual fund leadership |
| 2:15 p.m. | Afternoon Options
Tours of Clinical Science Center
Tours of 1300 University Avenue
Bus tours of city and campus
Elvehjem Museum of Art
Boat rides on Lake Mendota
Other |

Evening

- | | |
|-----------|---|
| 6:30 p.m. | Social Hour
Inn on the Park |
| 7:30 p.m. | Alumni Banquet |
| 8:30 p.m. | Presentation of Awards <ul style="list-style-type: none">• Teaching Awards• Emeritus Faculty Awards
John H. Juhl, M.D.
Clinton N. Woolsey, M.D.• Alumni Citations
Karl Beyer, Jr., Ph.D., M.D. '43
John Buessler, M.D. '44• Recognition of Graduating Seniors |

For class reunion plans see inside back cover.

Spouses' Reception

Our First Lady, June Schwartz, invites all alumni spouses to attend a relaxing, informal reception and diverting program on the morning of Alumni Day. The reception will begin at 9:00 a.m. in the Alumni Lounge of the Wisconsin Center overlooking Lake Mendota. The Wisconsin Center is located at the corner of Lake and Langdon Streets.

Following the reception, at approximately 10:00 a.m., Susan Curtiss of the Wisconsin State Historical Society will illuminate the changing role of women as she discusses her research on *Dress-making in Wisconsin 1890-1920*.

Plan to join scores of alumni spouses for a pleasant and informative Alumni Day interlude.



Mary Zupanc Elected to Outstanding Young Women of America



Assistant Professor of Neurology and Pediatrics Mary L. Zupanc has been selected one of this year's Ten Outstanding Young Women of America.

After she received her B.S. from UW-Madison, Zupanc—daughter of Clinical Professor of Pediatrics Edward Zupanc of Monroe—earned her M.D. at the University of California at Los Angeles in 1979 and served a residency in Pediatrics at the University of Washington (Seattle) and at the Harbor UCLA Medical Center. She was a UW Pediatric Neurology Fellow from 1982-85 and was named Assistant Professor of Neurology and Pediatrics in 1985.

Colleagues point out that Zupanc has the busiest clinic and is the most widely sought after consultant in Pediatric Neurology. She also has an active research program. For example, she and John Cameron, Emeritus Professor of Medical Physics, Physics and Radiology, have begun to delve into the new area of neuromagnetism. In the latter context, Zupanc recently took a "mini-sabbatical" at UCLA, where she learned more about magnetoencephalography, and while on the west coast she also trained at Stanford with an expert in neonatal EEGs. A magnetoencephalograph (MEG) recently installed in the Hospital is the only one in the Midwest and one of only three MEGs in clinical use worldwide; it measures the magnetic fields associated with the brain's electrical currents, and transforms them into a numerical profile of brain activity.

As a UW undergraduate, Zupanc was named to Phi Beta Kappa, Phi Kappa Phi, Mortor Board, Sigma Epsilon Sigma, and Crucible honor societies. She also received the 1971 Outstanding Freshman Chemistry Award.

While at the UCLA School of Medicine, Zupanc served on the Admissions Committee, the Educational Policy and Curriculum Committee, and the yearbook staff. In 1976, she was one of the organizers of the Committee for the Status of Women in Medicine. UCLA also presented her with the Stanford Medal for Outstanding Academic Achievement, and she was named to Alpha Omega Alpha. In 1979 Zupanc was awarded the American Medical Women's Association Janet Glasgow Award for Outstanding Academic Achievement.

At the University of Washington, she was a member of the Residency Selection Committee and Co-Chair of the University's Housestaff Association. (She has served on the Executive Board of the UW Housestaff Association from 1982-1984.)

Zupanc is particularly active in Physicians for Social Responsibility. She is currently Co-President of the organization's Madison Chapter and has served as secretary, and she has been named to the group's National House of Delegates and its International Congress.

Mary Zupanc also is mother, classical pianist and marathon runner, and she spent many years as Girl Scout Troop Leader and Camp Counselor. She is married to David Allen Jones.

Dilly's Finest

A TRIBUTE TO BEN LAWTON

by Wayne J. Boulanger, M.D.

Editor's Note: *Many fine tributes to Dr. Ben Lawton—Regent, Preceptor, Surgeon—have appeared in newspapers in Wisconsin and Chicago. This article is one of those, describing Ben Lawton the farm boy, baseball player, congenial Democrat and intrepid fighter. It was first published in the Wisconsin Medical Journal of January, 1987.*

If you drive west on Hwy. 33 out of Hillsboro and turn south on State Hwy. V, after a mile or so, on the summit of a hill, you will see a tiny white one-room schoolhouse on your left. It isn't a school anymore, having gone the way of so many such for the sake of "improvement" in our educational system. For a time in more recent years, it was used to store feed for cattle—to foster a different sort of rumination, I guess. Now it isn't used for anything. Its paint is peeling and the elements will soon claim it totally.

But fifty-five years ago it was a vibrant place during the school year, with a few days obligatory holiday during the potato harvest so the kids could help out at home. Just about all of the Dilly School students were farm kids, and all of them knew what it was like to do the chores in all kinds of weather before walking to school in the morning—knowing that before they could get to their homework they'd have to repeat the process at night.

We spent the afternoon recently with one of the Dilly Grade School alumni. He's in his sixties now, and has been inconvenienced slightly by the need to take his nourishment intravenously—a mode of alimentation his teacher did not prepare him for in those less complicated days of the thirties.



His education was solidly begun at the Dilly School, though, and when the family moved to Viroqua, and he went to high school there, he had no problems adjusting to "big city" life. Like all farm boys, he played baseball; and although he couldn't hit a breaking ball and tended to bail out on the high hard ones, he had good hands, and he did well as the catcher for the Viroqua baseball team. That the scorekeeper was his girlfriend certainly didn't hurt; and long after his baseball days were over, he hung on to the scorekeeper—and still does.

Today he's on the UW Board of Regents, having been its president. But his relationship with UW goes back a long way—to undergraduate and medical school days when his love affair with that institution began and where his political instincts came to the surface in that liberal Madison atmosphere.

If he hadn't been inclined toward medicine, he undoubtedly would have studied law and entered politics—and landed back in Madison or Washington eventually. But he finished his training at the Medical School and headed

for Marshfield, entering an environment where he was able to practice surgery and politics as well, and where he was never too far from his roots.

Always outspoken, and a congenial democrat, his colleagues found it hard to fathom his ability to make and keep so many friends from opposite political and professional backgrounds. The only explanation must be that his sincerity and forthrightness and intense commitment were so overriding that any antagonism he engendered in the heat of battle just didn't last.

Perhaps a country school background instills those qualities to a greater degree than has been appreciated. I've often wondered how he would have turned out if he had been born and raised in Madison or Milwaukee instead of Dilly. Would that intensity of commitment, still so apparent, have developed at all?

It doesn't matter now. What does matter is that he learned how to battle, sometimes to victory, occasionally to defeat, but always to give everything he had. And as he slowly loses this last battle, he maintains the same interest in his profession and his university and his colleagues and his combatants he always had. He knows no other way.

After a lively, bittersweet hour, we concluded our visit and walked to the car (past the Tony Earl sign now firmly embedded in the frozen Marshfield turf) wondering if our visit had made him feel better. I guess we'll never know what it did for him—only what it did for us.

Ben Lawton, we salute you!

Q

Medical Alumni Citation Recipients

John A. Buessler

Dr. John A. Buessler is one of those rare individuals who can feel at ease in a number of capacities—as practitioner, researcher, teacher, administrator, recruiter—and somehow manage to execute each function with skill and effectiveness.

An example of how his multiple talents can converge upon one endeavor is his fashioning of a new institution. In 1970, John Buessler was appointed Founding Vice President for Health Affairs and Founding Dean of the Texas Tech University School of Medicine. But there was no medical school at the time, and there were no allied health sciences. It was his mission to create them.

Buesseler's knowledge of medicine and his ability to conceptualize and organize long-range projects served him well. He defined the needs and resources of the region, formulated the mission of the new institution, and undertook long- and short-range planning for finances, facilities, and personnel. This constituted the basis from which to integrate and improve existing health science and service programs in the region and organize and institute new ones.

More specifically, he staffed the Medical School, designed its management structure, and planned and programmed its development—all within 23 months,

considered to be a national time record for the establishment of an accredited modern medical school. During his five years as Vice President he also submitted proposals to establish four additional health science schools for the Texas Tech University Health Sciences Center: Allied Health Sciences, Veter-



inary and Zoological Medicine, Pharmacy, and Nursing. All have been authorized by the State of Texas.

In his role as Founding Dean of the Medical School, Buessler was responsible for several innovative departments, the first of their kind based in a medical school, including the Departments of Health Communications, Biomedical Engineering, Computer Medicine and Biomathematics, Environmental Health, Health Organization Management, and Forensic Medicine. He also physically incorporated the Ambulatory Patient Care Clinics into the Medical School as an integrated activity—another first of its kind.

For these achievements at Texas Tech John Buessler was designated a distinguished and multidisciplinary University Professor—only the third individual so honored by the University. He also received the Board of Regents Resolution of Congratulations and a certificate of Citation from the State of Texas House of Representatives.

At the University of Missouri, which he joined as Professor and founding chief of Ophthalmology in 1959, Buessler had been involved in a similar project as he helped to initiate and develop the affiliations with Kansas City General Hospital and Children's Mercy Hospital, which subsequently formed the basis for the establishment

of the new School of Medicine and Truman Medical Center of the University of Missouri at Kansas City; as part of this effort, he served a year as Executive Director of Kansas City General Hospital and Medical Center. While at Missouri, Buessler also was elected acting Chairman of the Department of Surgery and he assumed University of Missouri System-wide duties as Chief Executive Officer for Missouri State Crippled Children's Service, Associate Director of the Missouri Regional Medical Program, and Coordinator for the Statewide Affiliated Programs with the School of Medicine.

Much of Buessler's success in such a variety of complex administrative accomplishments has been his ability as a people person—his knack for relating to members of complex organizations, and his skill in coordinating and negotiating with students, faculty, higher administrators, legislators, and the public. He has practiced listening to all points of view and realized the necessity to seek counsel and advice and to consider the environmental and social forces which influence the various populations with which he has been in contact. Perhaps most importantly, he believes in allowing people who are most closely involved in a particular area to make management decisions whenever possible—decentralization of authority and accountability.

John Buessler's medical career began in his native Madison, where he earned his UW baccalaureate and medical degrees with honor. After interning at Cleveland City Hospital, he served as a Captain in World War II and then trained in Ophthalmology at the Harvard Graduate School of Medicine, the University of Pennsylvania Graduate School of Medicine, Philadelphia Children's Hospital and the Philadelphia Skin and Cancer Hospital. From 1953 to 1959 he was in the private practice of Ophthalmology in Madison.

Medicine, however, was not the only field of higher education into which

Buesseler ventured. While at Missouri he earned an M.S. in Business Administration, majoring in Management and Employee Relations with emphasis on professional personnel. (At Texas, in fact, he became the first dean of a medical school and vice president for health sciences and health affairs in the country with a graduate degree in administration.) In 1966 he went on a one-year sabbatical leave to study Organizational Theory and Behavior at the Cornell University Graduate School in Ithaca, where he completed the course work (minus the dissertation) for a Ph.D. degree in Business and Public Administration.

Buesseler's career has also included teaching at the university medical schools of Pennsylvania, Wisconsin, Missouri, and Texas Tech as well as clinical and research activities that have resulted in many publications.

His wide swath of interests has brought Buesseler into consultant relationships with several groups at the national level: member of the Space

Medicine Advisory Group for the orbiting research laboratory of NASA; Atomic Energy Commission as member of Argonne National Laboratory Biology Committee, consultant for Biology and Medicine to the President of Argonne Universities Association, and Argonne Research Consultant in Biology and Medicine; member of Neurological and Sensory Disease Service Project Review Panel of the National Institutes of Health; and member of the Accrediting Council on Education in Journalism and Mass Communication.

The Armed Forces likewise have benefitted from Buesseler's multiple talents. Besides serving in Europe during World War II, he was recalled as a Major in the Air Force during the Korean conflict, has been a Colonel in the Army Reserve since 1965, and returned to temporary active Army duty in 1970 in Vietnam as Special Project Officer for the U.S. Secretary of Defense to conduct a field

study operational analysis of the Army and Marine Corps' aeromedical evacuation systems. In addition to being a Flight Surgeon and military parachutist, he had the distinction as a physician of being the senior ranking Special Forces (Green Berets) officer in Vietnam. He also is a graduate of the Army Command and General Staff College and the National Security Management program of the Industrial College of the Armed Forces. For such services, Buesseler has received several honors from the military including the Combat Medic Badge, the Air Medal (with clusters), and the Legion of Merit.

John Buesseler still finds time for active membership in and support of more than 20 professional and service societies, including the Society of Medical Consultants to the Armed Forces, the Academy of Management, the American Medical Association, the American College of Surgeons, and the American Academy of Ophthalmology.

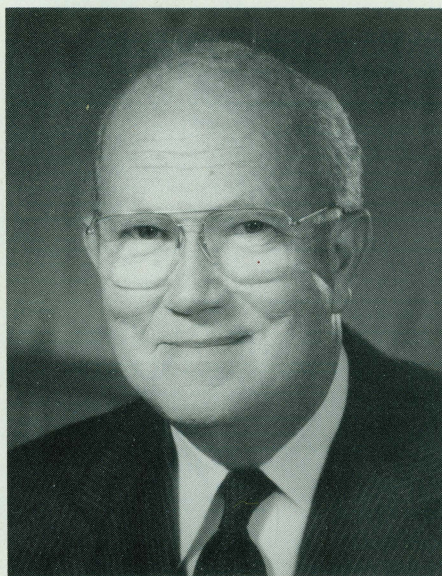
Karl H. Beyer, Jr.

In recent years, scientific enterprise is often conducted by groups of investigators. Research has largely become a team effort.

Dr. Karl H. Beyer realized the advantages of team effort as long ago as his UW student days, before the vast majority of biological investigators even considered serious collaboration with colleagues outside of their own discipline.

Beginning with his structure-activity work with sympathomimetic amines, Beyer reflected, "I gained a critically important insight that influenced the course of my life. It was the awareness that I would have to team up with capable chemists, biologists, and clinicians if I expected to accomplish as much as I wanted to. . . there is so much more that one can do by working with others." This spirit of reaching out and cooperation has undoubtedly served Karl Beyer well in his attaining such an eminent position in the pharmaceutical world.

Another factor in Beyer's success was his broad background, which he



enriched as an M.D.-Ph.D. student at the UW Medical School beginning in 1936. Here he was able to take some courses such as Karl Paul Link's Carbohydrate Chemistry at night, while during the day the flexibility of the University allowed him to juggle a variety of courses within as well as outside the Medical School. (The vast Department of Chemistry particularly attracted him.) Sometimes he would

gain a specific piece of knowledge by bringing research problems to the professors and learning precisely what he needed to carry out an aspect of his research.

Beyer's search for such broad academic and research training was straightforward and purposeful. He wanted to be able to synthesize compounds which seemed interesting by their chemical structure-biological activity relationships, and then be able to evaluate the compounds in patients. His foundation in physiology and chemistry, along with medicine, proved a sound basis for a career in pharmacology.

While at Wisconsin, Beyer particularly remembers the help of fellow student William B. Youmans, who eventually succeeded Walter Meek as Chairman of the Department of Physiology. Youmans arrived at the UW from Western Kentucky State College just two years before Beyer.

(At Western Kentucky, Beyer had taken a double major in chemistry and biology, having been inspired as a boy by an enthusiastic science teacher; his

love of chemistry was complemented by studying his veterinarian father's medical textbooks and by studying small animals in his little home "laboratory." He spent an additional year at Western Kentucky taking graduate courses in zoology and chemistry while teaching in both departments until he received a WARF scholarship in medical physiology.)

After 7 years at Wisconsin, during which he published 18 papers in major journals, received 3 advanced degrees (Ph.M., M.D., Ph.D.), and gained many scientific friends, Karl Beyer was ready to begin his fruitful exploration for therapeutics.

"There seemed hardly a transition between my graduate and medical school days at Wisconsin and the beginning of research as assistant director of pharmacology at the (Merck) Sharp and Dohme Research Laboratories, May 1, 1943, except that I had access to more of everything than I knew how to use, at first."

Beyer described his Merck pharmaceutical laboratory as a natural environment for turning today's theory into tomorrow's therapy and, he might have added, it proved to be a nurturing atmosphere for a creative scientist such as Karl Beyer to pursue new concepts—his pioneering work on diuretics, for example, which culminated in the introduction of chlorothiazide and the subsequent problem of convincing clinicians that a saluetic agent could be basic antihypertensive therapy. Another of Beyer's early successes involved development of a technique for depressing the renal excretion of penicillin; from this work on competitive inhibition of penicillin, he went on to develop probenecid, the first really useful uricosuric agent for the management of gout.

His diversified background, aptitude for collaboration, and keen scientific insight helped Karl Beyer develop and shepherd a number of other interesting compounds to the status of useful drugs in various fields of application. They include Elavil, Decadron, Indocin, Inversine, Aldomet, Mintezol, Amprol, and Periactin.

Beyer developed a systematic ap-

He recalls that, in each instance, the development of an interesting new compound into a useful new drug was much like the feeling he expressed as he flew his own plane around the country—hours of pleasure and moments of terror.

proach to conceptualizing and following through with a new product. He calls it *designed discovery*, a sequential process in which a compound is conceived in terms of sound principles, adapted to a hypothetical expression of the nature of tubular excretion (for instance), reduced to well-defined and controllable laboratory procedures, precisely supportive of critical structure-activity studies, and directed to an outcome that is translatable to a well-defined clinical objective. The pattern, however, is no guarantee of success, Beyer added.

The honors he has accumulated for this outstanding work include: President of the American Society for Pharmacology and Experimental Therapeutics, President of the Federation of American Societies for Experimental Biology, Chairman of the Physiology and Pharmacology Section of the National Academy of Sciences, Fogarty International Scholar-in-Residence at the National Institutes of Health, scores of honorary lectureships, and editor of several journals. The University of Wisconsin presented him with the D.S.C. degree in 1972, and the Medical School honors him yearly by sponsoring the Karl Beyer Visiting Professorship, funded by a rare Directors' Scientific Award given by the Board of Directors of the

Merck-Sharp-Dohme Chemical Co.

He also has received the Gairdner Foundation Award, the Modern Pioneers in Creative Industry Award, the Albert Lasker Special Award, the CIBA Award for Hypertension Research, the Modern Medicine Distinguished Achievement Award, the American Pharmaceutical Association Foundation Award, and many others.

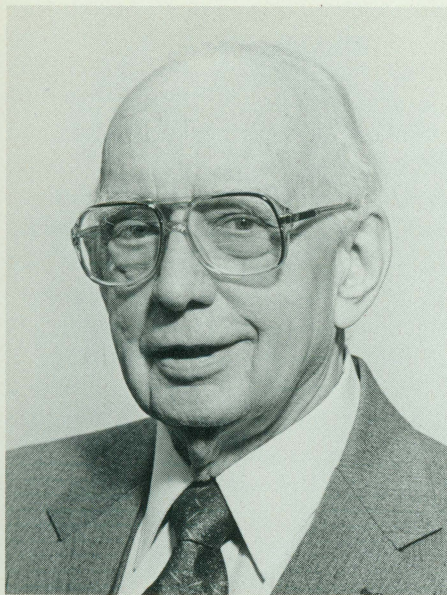
The story of Karl Beyer's career might have ended at age 59 upon his retirement from Merck on July 31, 1973 as Senior Vice President for Research. Instead, it merely took a sharp turn back to academia.

At Beyer's retirement party, Dr. Allan D. Bass, Chairman of the Department of Pharmacology and acting Dean of the Vanderbilt University Medical School, presented him a formal invitation to be a visiting Professor of Pharmacology at Vanderbilt. At the same party, Dr. Elliot S. Vesell, Professor and Chairman of the Department of Pharmacology at The Milton S. Hershey Medical Center of the Pennsylvania State University, also offered him a visiting professorship. When he accepted both positions—each a short plane ride from home—Karl Beyer's second career began.

"Teaching at both institutions has been a source of great personal satisfaction—at both the graduate and the medical student level." Beyer said. When he relates to medical students, he said, he makes it a practice to teach basic pharmacology as a clinical subject, not as molecular biology, which is more appropriate to graduate training in research. When he worked with graduate students at Hershey or with faculty and students in his more recent role as visiting professor at Harvard, he can draw more fully upon his experiences with the discovery, development and delivery of drugs.

At the Hershey Center, Beyer also returned to fundamental studies on the transport of basic organic compounds. "Setting up a new laboratory, training personnel, and handling experiments at technical as well as conceptual levels have been as pleasurable in this second time 'round as was learning about such things when a (UW) graduate student years ago." Q

1987 Emeritus Faculty Awards



Clinton N. Woolsey

Charles Sumner Slichter Emeritus Professor of Neurophysiology Clinton N. Woolsey traces his interest in science back to his junior year in high school in Schenevus, New York, where—to his surprise—he earned an award for being that year's outstanding scholar. The award was bestowed during the school's graduation ceremony, which was attended by a visiting physician from western New York. Dr. Walter Allen Cowell became intrigued with the award winner and asked the principal about young Clinton Woolsey. The principal must have delivered a glowing report, for the doctor asked him to persuade Woolsey to continue high school in Olean, N.Y., the doctor's home.

Woolsey accepted the invitation and came under the spell of Dr. Cowell, who—although he was a general practitioner—was interested in new research findings and in applying new remedies to his patients and writing up the results. It was by associating with Cowell that Woolsey took on the notion of becoming a doctor and that a doctor ought to investigate as well as practice.

The next phase of Woolsey's life took him to Cowell's alma mater, Union College, a small school in Schenectady, N.Y., near the foothills of the

Adirondacks. At Union he became influenced by Professor of Psychology Johnny March. "He was a perfectly wonderful teacher," Woolsey said, "and could present results of experiments so vividly that you almost felt you were right in the presence of the experimenter and the animal he was studying. . . . For a time, I thought of going into the field of behavioral psychology. But my thoughts were already settled on medicine."

Shortly after interviewing for Johns Hopkins—described by Union associates as having a wonderful curriculum—Woolsey was accepted as a medical student and began his studies in 1928. He soon came in contact with neuroanatomist Dr. Marion Hines, who asked him what he wanted to do. Woolsey answered that he wanted to be a brain surgeon—an ambition he held through medical school and a while into his research career.

Hines became another guiding force in Woolsey's career. After he took her course in cortical localization, Hines offered Woolsey the opportunity to work with her on the dog brain—a splendid chance for a potential neurosurgeon to test his skills.

Before finishing his fourth year, a health problem intervened with schooling and, inadvertently, changed the course of his life. Because of minimal pulmonary tuberculosis—a common problem among medical personnel in those days—Woolsey had to drop out of school for about 6 months and graduate with the class of '33. When he applied for an internship in surgery, the Professor of Surgery advised him to work in the laboratory for a year and defer the physically demanding life of an intern, which might reactivate his pulmonary lesion.

Dr. Philip Bard, just recruited as Chairman of Physiology from Harvard, where he had worked on the cat brain, invited Woolsey to work in his lab. It wasn't too long before Clinton Woolsey realized that his future would lie in physiology and not brain surgery.

At first, he and Bard studied the effects of scooping out parts of the cat

and later the monkey brain and noting the effects on certain reactions. Woolsey soon developed an aspiration technique which minimized bleeding and did not damage the remaining cortex.

Then, with initial help from Wade Marshall, Woolsey began the electrophysiology work that was to bring him fame—mapping the projection of the body surface on the cortex.

Part-way through his Hopkins career, Woolsey spent two years as a postdoctoral fellow in Orthopedic Surgery studying the neuromuscular system; also, he and Ed Walzl performed the first experiment in which localization for different parts of the cochlea was shown in the cortex; subsequently, Woolsey found a second auditory area.

In 1940 Jerzy Rose joined the Hopkins staff, and an enduring partnership developed between neuroanatomist Rose and neurophysiologist Woolsey—a collaboration that was reignited when Rose was able to join the UW Laboratory of Neurophysiology in 1960.

Associate Professor of Physiology Woolsey also lectured and taught students in the laboratory at Johns Hopkins until 1948, when he was invited to instigate a research program on the nervous system as the Charles Sumner Slichter Professor of Neurophysiology in the UW Medical School's Department of Physiology. (Please see Department of Neurophysiology article for more information concerning the circumstances of Woolsey's coming to Wisconsin and his early lab days.)

At Wisconsin he was able to expand his cerebral localization studies, recruit a number of valuable and varied workers, many of whom are current faculty members, and obtain NIH funding for the group's research activities. In 1960

Woolsey's section of neurophysiology became the independent Laboratory of Neurophysiology under his directorship and moved into the new Medical Sciences Building.

In 1973 the Waisman Center on Mental Retardation and Human Development opened its doors to a number of researchers from various departments around campus as well as clinicians. From 1973 until 1978 Woolsey headed the Biomedical Sciences Research Unit, concerned with biomedical studies of normal organization and function. In the meantime, he continued his directorship of the Laboratory of Neurophysiology until his retirement as Emeritus Professor in 1975.

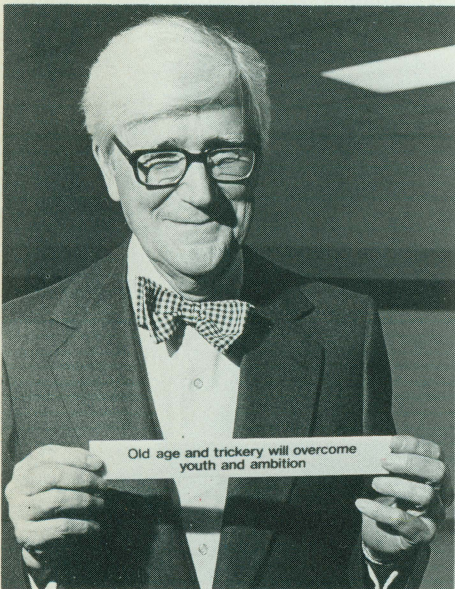
In recent years, Woolsey has edited a three-volume work, *Cortical Sensory Organization*, and has prepared some past work for publication; it seems to be a common problem among neurophysiologists that massive amounts of data build up before they are published years later—if ever.

Although Clinton Woolsey's pioneer-

ing research on cerebral localization and organization has left a lasting mark on neuroscience and on the Department of Neurophysiology, other institutions and other countries have likewise benefitted from his participation and counsel.

He first went abroad, for instance, in 1958 when the National Institutes of Health asked him to participate in an exchange mission to the U.S.S.R. Later, as a member of the International Brain Research Organization, he helped organize workshops in Chile, Shanghai, and Algiers. He has likewise organized and/or participated in many other meetings and symposia—some held in his honor.

Woolsey also served on the editorial boards of the *Journal of Neurophysiology*, the *Journal of Physiology and Physiological Reviews*; represented the American Neurological Association to the National Research Council of the National Academy of Sciences; was special consultant to the National Institute of Mental Health; and served on the committee for the Neurological Diseases and Blindness Institute.



John H. Juhl

If you're genuinely interested in the people you try to teach and in your subject matter, it's not hard to be a good teacher. And it helps to be a bit of a ham.

This is the unpretentious accounting

that Emeritus Professor of Radiology John Juhl gives of his teaching abilities. Others who have been attracted to the Juhl magnet, however, are far less temperate.

They call his teaching "excellent," "superb," and "highly regarded."

Chairman of Radiology Joe Sackett recalled that medical students and residents particularly like his manner. "He has a friendly way of challenging a student, and he is always supportive, never destructive." In appreciation of his teaching and his caring attitude, residents presented him with the Outstanding Faculty Award—1979. John Juhl has, in fact, been the mentor of numerous medical students and residents who have gone on to become successful practitioners and academics.

A graduate of the University of Michigan Medical School, Juhl came to the UW Medical School after serving with the U.S. Navy in World War II.

His many honors include membership in the National Academy of Sciences, an honorary Sc.D. from Union College, the Distinguished Service Alumni Award from Johns Hopkins, and (along with longtime collaborator Jerzy Rose) the Ralph Gerard Award.

Colleagues, former students, and friends have been honoring Clinton Woolsey for his major contributions by sponsoring the Clinton N. Woolsey Lecture in Neuroscience for the past 11 years. The lectureship brings distinguished scientists to the University to further, through the exchange of information, the advance of neuroscience. One the the past speakers (1981) was his son Thomas A. Woolsey, Associate Professor of Anatomy at Washington University School of Medicine in St. Louis. Son John D. Woolsey, M.F.A., is an artist and medical illustrator, while son Edward A. Woolsey recently received his Ph.D. in Zoology at UW.

After completing his residency in Radiology in 1949, he taught for two years before going into private practice in Minneapolis. But Juhl seemed inexorably drawn to Madison, and returned to the Medical School faculty in 1953. Here he remained for the next 27 years.

For ten of those years, 1964 to 1974, Juhl's leadership as Chairman helped guide the Department of Radiology through the greatest period of growth and change in its history. With Juhl's support, for example, radiotherapy flourished under Halvor Vermund, developing an excellent research and training program with an NIH Center grant while continuing extensive patient care. (The radiation therapists eventually joined Human Oncology.)

Medical physics originally came into its own under Juhl's influence and foresight; John Cameron was recruited and administrator Juhl was able to obtain the initial funding of faculty for diagnostic radiological physics. The discipline has since become the De-

partment of Medical Physics, which is preeminent in the medical physics world and widely known for developments such as digital subtraction arteriography, bone mineral densitometry, and thermoluminescent dosimetry.

Diagnostic radiology greatly expanded under Juhl's leadership, and the Radiation Biology Program and nuclear medicine services began. And Juhl recruited Joe Sackett to lead the Department into the area of neuro-radiology.

“He didn't simply perpetuate the traditional scope of radiology,” according to Associate Dean Ralph Hawley. “He introduced new elements that were just beginning to emerge elsewhere.” And Juhl took a broad view, Hawley added, supporting what he felt to be the common good of the Medical School.

John Juhl had his full share of problems to handle as Chairman. Radiology as well as the whole Medical Center was starving for space, and he had to see to it that the best was made of a poor situation. He helped the therapy program develop by expanding in the basement and excavating out into the courtyard. And he managed to find room and money for expensive equipment such as the Betatron, a high-energy machine used both for therapy and research.

Juhl's chairmanship also encompassed the painful period when the faculty and administration of the Medical School sometimes saw matters differently. “I had to train 5 or 6 deans,” Juhl said. His sense of humor and fair-mindedness, along with his soft-spoken, considerate manner, gained the respect of his colleagues during those hard times and served as a source of conflict resolution, especially as he chaired many major faculty committees.

John Juhl is also known as a superb clinical radiologist, one of a breed which is rapidly becoming extinct: an academic general radiologist. Over the years he has developed considerable expertise in the interpretation of such disparate examinations as gastrointestinal studies and chest films. For such clinical skills and his teaching abilities, he has been invited back to the Depart-

ment of Radiology for a month each year since he left for New Mexico in 1980. House staff, medical students and most senior faculty members avidly seek his consultation. About his month-long stays in the Department, Juhl says, “They're very kind. And it's a lot of fun to come back.”

His old friends also seek his delightful companionship while he's in town as he rejoins what is quite likely the oldest poker group on campus, having been alive and active for decades. “They're looking for a little New Mexico money when I come,” Juhl said, “and I'm looking for a little Wisconsin money.”

Juhl and Peter Eichman once gambled on a racing horse that they jointly invested in—a horse that was a sure winner. The horse, however, was not sufficiently cognizant of his grand reputation. He never won a race.

John Juhl's impact on teaching extends far beyond Wisconsin and New Mexico, his recent home, through his book “The Essentials of Roentgen Interpretation,” originally published with Lester W. Paul.

This widely-acclaimed book has been the basic reference text for students and residents for nearly three decades,

and has made Juhl's name a household word among radiologists.

He has recently completed the fifth edition of the book, this time soliciting contributions from a number of his colleagues. “Many of us were very late getting our materials in,” Sackett said, “but John would nudge us along in a good-natured way.”

John Juhl has been duly honored by the people who know him best, his UW colleagues. Before leaving Madison, he received a farewell present: the Dr. John Juhl Radiology Library and Conference Room was named in his honor. “I feel tremendously honored,” he said at the time. “To my knowledge there are only a few rooms named after people in the hospital. The other thing I feel good about is that I'm glad to be on this earth long enough to see it

named the John Juhl Radiology Room instead of the John Juhl Memorial Radiology Room.”

Colleagues, friends and former Radiology residents have also contributed to the John Juhl Visiting Professorship in Radiology, which supports distinguished radiologists as visiting professors to the Department each year.

Other distinctions that Juhl has earned include: Chief of Staff of University Hospitals, 1962-63; Fellowship in the American College of Radiology; member of the Board of Directors of the Wisconsin Radiological Society (1957-64); President of the Wisconsin Radiological Society (1962-63).

“Retirement” life in Las Cruces, New Mexico, includes plenty of physical activity, including a three-mile walk with wife Barbara in the morning, occasional golfing, a fair amount of tennis—and a little poker. Juhl particularly enjoys the beautiful red colors that adorn his backyard trees—cherry, apple, apricot, pomegranate, and peach. “We get a marvelous amount of fruit, and we don't even do anything about it.”

Students and practitioners of radiology still benefit from the Juhl touch, for he teaches eight weeks a year at the University of New Mexico Medical School in Albuquerque, an activity he still very much enjoys.

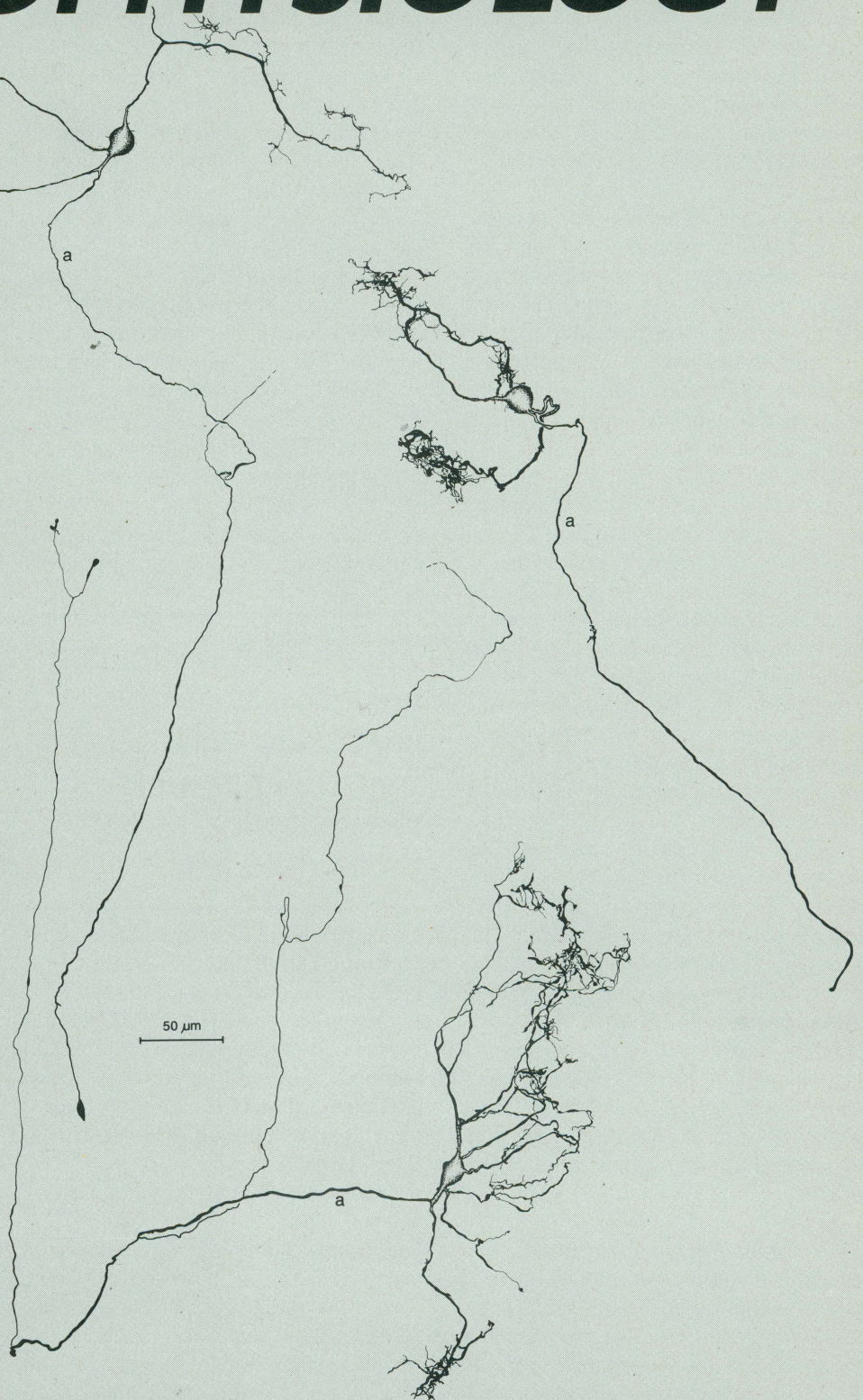
And the fifth edition of “The Essentials of Roentgen Interpretation,” just finished, has taken him nearly two years to complete—and to chase after dilatory contributors. Q

The Department of *NEUROPHYSIOLOGY*

Modern neurophysiology addresses the nervous system from different but complementary orientations. In the systems approach, researchers try to fathom the behavior of large systems, or networks, of nerve cells. In the cellular or molecular approach, the behavior of the system's individual neurons is explored. Interaction between both ends of the spectrum is essential for a comprehensive appreciation of brain functioning, for one can't understand the significance of a single nerve cell unless it's seen in relation to its interactions within the system, and neural systems can't be thoroughly understood without knowledge of how individual elements work.

The Medical School's Department of Neurophysiology—thought to be the only department in the country so designated—represents a fertile blend of both molecular and systems investigators using some of the most advanced computer technology available anywhere in the world.

At its beginning, however, what was to become the Department of Neurophysiology consisted of one young scientist recruited from the Johns Hopkins University School of Medicine. Dr. Clinton Woolsey (M.D. '33, Johns Hopkins) had already acquired a solid reputation for his early research on cerebral localization at Hopkins, where he was a faculty member from 1933 to 1948. His training and experiences at Hopkins have substantially influenced the UW Department of Neurophysiology, as reflected in its long-standing interest in areas such as the somatosensory, motor, visual, and auditory cortex.



This single nerve cell was stained with an intracellular pipette by Associate Professor of Neurophysiology Donata Oertel.

Woolsey's invitation to join the UW Medical School in 1948 came about after he presented a paper concerning the "Patterns of Sensory Representation in the Cerebral Cortex" at the 1947 annual meeting of the Federation of American Societies for Experimental Biology. UW Professor of Physiology Walter Meek heard the paper and, apparently impressed with the presentation, is thought to have suggested that Woolsey be interviewed as someone who could help develop studies on the nervous system at the University.

It happened that Meek, who was interested in the nervous system, especially from the viewpoint of a teacher, also was part of a Graduate School committee whose charge was to search for candidates to fill a new professorship, the Charles Sumner Slichter Professorship, created to mark the centennial year of the founding of the University. Woolsey and UW officials assessed and soon accepted one another, and Woolsey became the Charles Sumner Slichter Professor of Physiology. (The other professorship honoring the centennial was the Frederick Jackson Turner Professorship of History, given to Professor of History Merle Curti, now Emeritus. The Slichter and Turner Professorships were the first two named professorships on campus.)

Woolsey's mission in the Department of Physiology was to develop research on the nervous system through graduate education and postdoctoral training, giving only occasional lectures to medical students in special areas that his group might be involved with. To this day, Neurophysiology remains a research-oriented department, although it also makes substantial contributions to the teaching of medical students.

A Department is Born

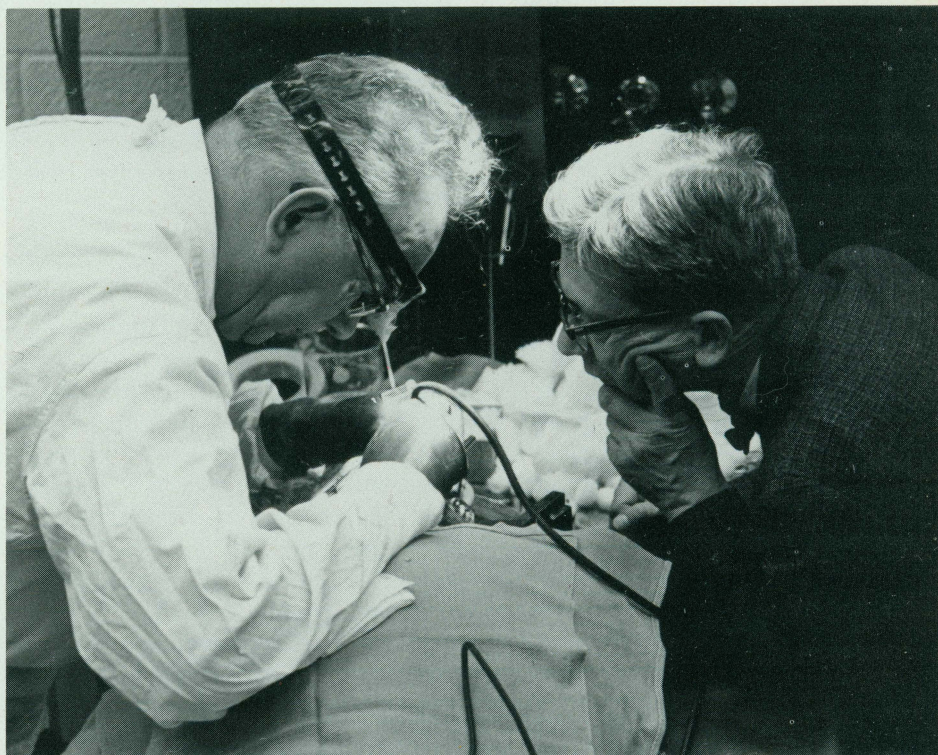
With Woolsey's arrival in 1948, neurophysiology became a new section of the Department of Physiology. The group gradually prospered and increased until, in 1960, the neurophysiology staff was approaching the size of the rest of Physiology. Also in 1960, a long awaited event took place: the Medical Sciences Building was

completed and new space for neurophysiology, designed by Woolsey and colleagues, became available, fulfilling a promise made to Woolsey in 1948. Because the move from SMI to the new building physically separated the neurophysiology staff from the rest of the Department of Physiology, and because of the burgeoning size of the neurophysiology section and the differing missions, the Laboratory of Neurophysiology was established as an independent research group under the direction of Clinton Woolsey, who reported directly to the Dean of the Medical School.

whose staff and unique facilities train and aid investigators around the world.

The International Connection

Neurophysiology has enjoyed an international flavor since its early days. Graduate students, postdoctoral fellows and visiting scholars have come from Switzerland, France, Italy, Spain, Poland, England, Algeria, Japan, Thailand, Malaysia, the Sudan, Singapore, Canada, Australia, Colombia, Brazil, Argentina, Germany,



While Professor of Neurophysiology Jerzy Rose looks on, Professor Clinton Woolsey operates on a chimpanzee. They will study the animal for the next several days. The photo was taken in the early 60's.

Woolsey remained Director of the Laboratory of Neurophysiology until 1973, when Neurophysiology became a department within the Medical School with Joseph Hind as chairperson. Woolsey had urged such a change because he wanted to insure continued existence of this unique group, consisting of physiologists, anatomists, psychologists, and engineers—a harmoniously functioning group with strong NIH support whose research efforts had gained an enviable reputation in several areas of neuroscience.

Today the Department is a specialized kind of research organization

China, the Netherlands, Sri Lanka and Chile.

Chilean workers were particularly numerous for a number of years because the Department maintained a 20-year research relationship with the University of Chile's Department of Physiology and Biophysics under a paired-grant program sponsored by NIH.

Many of these young trainees from foreign lands as well as many from the U.S. are now eminent scientists and leaders of neuroscience labs throughout the world. Others have gone into clinical neurology and head depart-

ments of neurology and neurosurgery in the U.S. as well as Canada, Argentina, Spain, Poland, England, Brazil, Singapore, Chile, and Japan.

Cerebral Localization Research

When a brief mechanical stimulus is applied to a specific part of the body surface, it produces a brain impulse (an evoked response) which can be detected and recorded; similar responses can be evoked by activating the eye by light and the ear by sound. Conversely, one can electrically stimulate specific locations on the brain and note the movement of specific parts of the body. When appropriate stimuli are systematically and extensively applied to the body, the eye or the ear, and recordings are made in the responding regions of the brain, one can construct a map, or model, of the brain which shows the orderly anatomical localization of sensory functions in discrete centers, or nuclei. Motor maps are similarly produced by electrical stimulation of the brain. Every part of the brain appears to have a specific localized function.

Clinton Woolsey is undoubtedly the dean of cerebral localization, having studied—in painstaking detail—more kinds of animals and systems than anyone else.

He would, for example, move a stimulating electrode in 1mm steps over motor areas of the brain of an animal and determine the specific parts of the body related to the cortical recording sites. He then made figurine maps of the brain in which drawings of corresponding body parts were represented on the brain surface, a technique that proved to be a most helpful visual aid. Woolsey's work on the motor and sensory systems has brought him many honors, including election to the National Academy of Sciences. (Please



Chairman of Neurophysiology Joseph Hind also heads the Department's auditory research program.

see Clinton Woolsey's biography elsewhere in this *Quarterly* for more description of his research.)

Experiments in Woolsey's lab in the earlier years often lasted for several days—always for at least two days. This entailed many overnight sessions, with half-asleep experimenters stopping for midnight lunch at the Woolsey home. "Whether we were stimulating the motor cortex or mapping the sensory cortex," Woolsey said, "the experiment was more valuable the more data you could get on a single animal and the more extensive the coverage. One way of doing that was to keep the experiment going around the clock. . . . Once you get involved with it, you don't want to quit."

Woolsey's ability to direct and work with people and still let them follow their own bent when the time came no doubt helped form the basis for Neurophysiology's success. "We had groups," Woolsey said, "and I could be involved with several people. They could have their own projects that they'd get started, so they'd ultimately get off on their own feet."

Professor of Neurophysiology Wally Welker continues some of the laboratory's original localization work. He is examining the somatosensory projections to the cortex of the cerebellum with recording microelectrodes insert-

ed every 50–100 micrometers; a square mm of cortex thus receives as many as 100 or more punctures, and he finds very small, discrete differences in the corresponding locations of inputs from different body regions. The process gives Welker the ability to map sensory inputs to the cerebellum in exquisite detail. Since the surface area of the cerebellum is very extensive, his work is a long-term, complicated project described by Woolsey as "beautiful work," for which Welker is well-known.

Woolsey and Welker have both specialized in the comparative approach to studying the brain. Welker, for example, during his study of the cortical tactile system, found that the raccoon, known for "washing" its food, receives most of its sensory information from the surface of its large digits; when the skin is moist, it can feel even more sensitively. He located areas in the raccoon's brain where each of the digits of the hand were clearly and separately represented; those areas are much larger portions of the sensory cortex than the equivalent areas in the human brain, Welker said, just as the large tail of the spider monkey is represented by an extra-large area in that animal's brain.

"Comparisons of these mappings," Welker explained, "give us some in-



Professor of Neurophysiology Wally Welker examines a slide from the Department's extensive brain collection. A stained section is projected on a video screen (right) where, in conjunction with a computer, features can be quantified and measured in great detail.

sight into the principles of the differential development of the brains of animals, which indicates the range of flexibility of brain development during evolution."

Currently Welker is studying neuroanatomical organization of the brains of Florida manatees jointly with investigators from universities in Michigan and Florida. "The manatee is an endangered species whose brain has never been studied microscopically. It has a huge auditory system and a large prehensile snout," characteristics which allow brain-behavior correlations to be established, which is a major aim of Welker's comparative brain study.

Welker also pursues quantitative comparative neuroanatomy by examining slides from the Department's large brain collection, started in the 1950's. The stained sections are projected on a video screen, where, in conjunction with a computer, brain features can be quantified and measured in great detail.

Microelectrodes Fine-Tune Localization Research

Microelectrodes were introduced to UW Neurophysiology workers in the summer of '58, when Jerzy Rose and Philip Davies came from Johns

Hopkins to spend the summer at the lab. Rose had developed the tiny electrode several years earlier, and it proved to have distinct advantages over the conventional electrodes in use at the time in that it maintained contact with neurons for long periods of time and provided relatively large electrical signals. A microelectrode, about 3-5 microns in diameter at the tip, can record from a single nerve cell, while a "gross" electrode, roughly 1 mm at the tip, records from hundreds or thousands of nerve cells at once. While microelectrodes yield action potential spikes of about the same amplitude, the gross electrode picks up the surface potential of large numbers of cells to produce wave forms which change slowly in amplitude as the strength of the stimulus is changed. Thus, microelectrodes can be used to study the finer grained patterns of connections within the nervous system.

The development of computer technology (discussed later in this review) further enhanced the usefulness of microelectrodes, for computer-controlled experiments allow a great many more stimuli to be administered and responses recorded; computers also quickly analyze data, permitting almost instantaneous feedback of results to the experimenter and more complex experimentation.

Welker, who was a member of Woolsey's group at the time of Rose's '58 visit, subsequently developed other metal microelectrodes and began micromapping methods to produce more detailed sensory and motor maps of the brain.

Rose joined the Department in 1960 to continue his distinguished career, which includes election to the National Academy of Sciences (1972). Woolsey had wanted his Hopkins colleague to join him at Wisconsin when he first came in 1948, but Rose was not able to come at that time. In Woolsey's words, "We needed a neuroanatomist, because research on the nervous system involves not only electrophysiology. I said it's very important to have the anatomy of the system related to the physiological findings." When he finally came to the Department as a faculty member, Rose stimulated the auditory microelectrode work for which the Department of Neurophysiology is renowned.

Stereotaxic Atlases

Professor of Neurophysiology and Neurology Al Berman, working in his Waisman Center Laboratory, has spent many years producing stereotaxic atlases of the brain which are published in massive books that measure 1-1/2 by 2 feet.

Berman takes large photomicrographs of brain slices which show great detail as well as the locations of nuclei. When he presents the photos in chart form, he includes coordinates along the side of each photo so that an investigator can find his way to any particular location he may be interested in, including the deeper, more hidden parts. Berman has received widespread recognition for his extensive and useful publications.

Charting the Hypothalamus

Professor of Neurophysiology and Women's Studies Ruth Bleier is a neuroanatomist who began her research studies with Jerzy Rose at Johns Hopkins. Her primary interest has been in the structure and organization of the hypothalamus, and she has published cytoarchitectonic atlases of

the hypothalamus of a number of animals widely used in experimental work. Bleier also has been using scanning and transmission electron microscopy to look at a resident macrophage system in the ventricles of the brain. With immunologist Ralph Albrecht, Professor of Veterinary Science, she has been characterizing these cells immunologically in cell culture.

Bleier also chaired the Women's Studies Program for several years, and is broadly known for her books and other writings stating her belief that social values and beliefs lead scientists to extrapolate findings of sex differences in animals to theories of sex differences in humans and female inferiority. An example of such bias can be found in the dominant theory that right hemispheric lateralization (presumably male) is superior to bilateral hemispheric processing of visual-spatial information (presumably female), "in spite of the absence of any evidence whatsoever," Bleier said. The problem is compounded, she added, because once such ideas of sex difference in cognitive ability gain credence through publication in scientific

journals, they are perpetuated via publication in textbooks and the social science literature—yet they are no more valid than the 19th century bogus theories of craniology.

Auditory Research— The Computer Connection

The area that is best developed within the Department of Neurophysiology concerns auditory research, headed by Professor and Chairman of Neurophysiology Joseph Hind.

Hind said that one of the factors that made the Department so outstanding in the auditory field was its early plunge into engineering. For example, Hind recruited an MIT-trained electrical engineer, C. Dan Geisler, from the Bell Laboratories, because of his knowledge of the auditory system as well as of engineering. (Hind himself is an electrical engineer and a Ph.D. psychologist.) Hind and Geisler were selected to spend the summer of '63 at MIT to take part in a government-sponsored program designed to evaluate the usefulness of small, highly specialized computers in biomedical

research laboratories; MIT had developed a radically new type of small computer and wanted to test the feasibility of training a dozen biologists from around the country to be computer engineers.

"Dan and I assembled a LINC

(Laboratory Instrument Computer), learned how it worked—its ins and outs, programming, engineering—and then brought it back to Madison." This LINC was the first laboratory computer in the Medical School and Neurophysiologists soon built their auditory research program around the computer, which could automatically control stimuli, record timing of spikes, and display and analyze data. Previously, the experimenters used to photograph the cathode ray oscilloscope on which neural spikes appeared; with great effort, they might count a few thousand spikes during the course of an experiment and try to figure out what a given neural unit was doing. "With the computer," Hind said, "we just let the

Jerzy E. Rose



Emeritus Professor of Neurophysiology Jerzy Rose was born and educated in Poland, receiving additional training in Germany. When he emigrated to the U.S. in 1939, he became a researcher at the Johns Hopkins University School of Medicine, where he could make good use of his training as a physician and neuroanatomist as he undertook his important series of studies on the cerebral cortex of the rabbit, sheep, and cat. Rose also met Clinton Woolsey at Hopkins, and the two researchers began a long-lived and fruitful collaboration, which included their classic work on the auditory areas of the cerebral cortex and thalamic connections.

When Rose joined Woolsey's Laboratory of Neurophysiology in 1960, he introduced single-cell recording and soon became one of the first neurophysiologists to take

advantage of computers. He has consistently blazed new trails in understanding the nervous system, such as his investigations into how single neurons encode acoustic information at all levels of the auditory system.

Much of Rose's success, colleagues say, lies in the breadth of his research interests over the years: he has always been eager to master new and unfamiliar techniques which enabled him to explore virgin territory with characteristic intensity and depth. His innovative ideas continue to open new areas of research.

Jerzy Rose has collected an array of awards and honors. The most recent is the Award of Merit of the Association for Research in Otolaryngology (1987). Another prestigious honor was his 1972 election to the National Academy of Sciences.

system run and the computer counts and times spikes no matter how fast they come. It opened up the new era of modern auditory neurophysiology.”

When addressing audiences at IBRO (International Brain Research Organization) neurobiology workshops in Algiers and Shanghai a few years ago, Hind said, “. . . In the laboratory, computers generate stimuli and analyze data with a degree of precision and speed that cannot otherwise be achieved. Most importantly, on-line usage, while an experiment is in progress, provides the basis for optimizing experimental strategy. An example is the use of adaptive techniques, whereby the computer adjusts stimulus intensity in relation to some measure of neural response, to achieve automated determination of a sensory threshold. To theoreticians, mathematical models and simulations offer a means to test quantitative hypotheses and suggest critical measurements to their experimental colleagues. . . .”

Nearly all the laboratories in today's Department of Neurophysiology are computer-controlled because the Department is heavily into engineering as well as physiology.

Data analysis, for example, is largely performed through an engineering approach, and researchers use the mathematical techniques of engineers to describe the acoustic system.

Some Early Auditory Work

The earliest auditory microelectrode studies after the arrival of Jerzy Rose involved, in addition to Rose, Joe Hind, Dan Geisler and several postdoctoral fellows who analyzed the behavior of neurons in the inferior colliculus as sound stimuli to the two ears were varied in time and intensity. These studies demonstrated binaural interactions which underlie the ability of a

listener to localize a sound source in space.

Later, Rose, Professor of Neurophysiology John Brugge, and Joe Hind investigated more peripheral portions of the auditory system. Their first work together involved the study of single fibers of the squirrel monkey's auditory nerve. (Each neuron has a single fiber which extends from the cochlea to the brain and carries messages about the auditory signal.) They contacted the fibers before they entered the brain and studied how they behave in response to auditory signals. By learning how the coded message about an auditory signal is represented in the discharges of a single auditory nerve fiber, they hoped to understand the nature of the information entering the brain that describes an auditory signal.

Rose, Brugge, Hind and a steady stream of colleagues spent many years pursuing this line of research. Their work evolved from using simple tones to using complex tones, which enabled them to determine that the nerve fiber response was directly related to movements of the organ of Corti, the sen-

sory organ within the cochlea that stimulates nerve fibers. By using computer-controlled stimuli, they found that the fiber actually responds to deflections of the basilar membrane on which the organ of Corti rests; as the organ of Corti moves up and down under the influence of a sound stimulus, the sensory receptors known as hair cells stimulate nerve fibers.

By studying fiber discharges to varying stimuli, the Wisconsin Neurophysiologists learned much about the process whereby the cochlea changes mechanical motion into neural signals. These investigations provided new information on the timing of neural discharges which might be used by the central nervous system to code signal frequency rather than relying solely upon the position on the basilar membrane which is maximally stimulated by a given stimulus frequency because of the mechanical frequency to “place” action that the cochlea performs. (There are two theories about how the brain determines the pitch of an auditory stimulus: 1) the place theory of hearing, in which fibers are activated according to where they are connected

Facilities

The unique facilities developed and used by the faculty and staff of the Department of Neurophysiology have contributed in large part to its accomplishments, especially in the research areas that depend heavily upon high technology.

The Medical Electronics Lab, although a Medical School-wide facility, has developed largely with support from Neurophysiology. For many years, lab personnel have made use of their expertise and equipment to build or modify instruments needed by Neurophysiology researchers. Much of the Department's progress would not have been possible, Chairperson Hind said, without this facility.

Similarly, the Neurophysiology Computer Lab and the Neurohis-

tology Lab, both of which do work for other groups on campus, are “among the best in the world,” according to Hind. Excellent photography and illustration facilities also aid Department of Neurophysiology workers as well as faculty from the entire Medical School.

“We've been fortunate to have a tremendously dedicated staff with very low turnover,” Hind said. “Most of the people (who staff the facilities) have been here 20 years or more.” The technical staff persons are located mainly in the Medical Sciences Building; others work in the Waisman Center on Mental Retardation and Human Development, where Professors Brugge, Bleier, and Ber- man have their laboratories.

in the cochlea—one can tell what the signal frequency is by noting which fibers are active; 2) the telephone, or volley theory, which is concerned with the timing of discharges. The latter has been the thrust of the work described here.)

A landmark series of papers described how the auditory nerve responds to various complex signals. Later, the researchers moved on to higher levels of the nervous system, the cochlear nucleus in particular, repeating some of the aforementioned work. These investigations have continued into the present.

John Brugge, for example, continues his studies on the development of the auditory system in his laboratory at the Waisman Center, where he explores higher levels of the brain such as the auditory cortex. He has recently been honored by receiving the 7-year Javits Neuroscience Investigator Award from the National Institute of Neurological and Communicative Disorders and Stroke.

Auditory Research— David vs. Goliath

Professor William Rhode, a student of Geisler, received his Ph.D. at the UW in electrical engineering, but did his thesis work in the Neurophysiology lab, as have many of Geisler's other students. Rhode measured the movements of the basilar membrane in the cochlea using the Mossbauer technique, through which the motion of a piece of radioactive foil placed upon the moving structure can be used to determine the structure's vibrations with the help of a radioactivity counter and a computer. Rhode's model was the squirrel monkey.

Graduate student Rhode found important discrepancies between his results and those of Hungarian Nobel Prize winner Georg von Bekesy. Bekesy had removed human temporal bones immediately after death and looked at their vibration under a microscope using very high intensity sounds; from these observations he provided the first precise description of cochlear mechanics, which included the thesis that the basilar membrane responds linearly—when the amplitude of the signal is doubled, the structure



Associate Professor of Neurophysiology Tom C.T. Yin operates on a cat, the experimental animal he most often uses.

vibrates at twice the amplitude. Rhode found that this relationship holds only under certain conditions, notably in damaged ears and at high stimulus intensities, but that in a living animal, significant non-linearity occurs: when the amplitude of a signal increases, the amplitude of vibration doesn't increase proportionally, but much less. Rhode's results included the observation of sharp tuning curves as opposed to the very broad curves of Bekesy, thus, in large measure, explaining the sharp tuning ability of a single nerve fiber.

When Rhode first published his results in 1971, they were received with skepticism by the scientific world. In recent years, however, many other workers have confirmed Rhode's results, which heralded the beginning of a new era in cochlear physiology. Most neurophysiologists now believe that the organ of Corti, previously considered a passive transducer, actively participates in changing mechanical motion to nerve discharges. "The hair cells in a living animal, we think now," Hind said, "change their mechanical properties in response to a stimulus and thereby increase the sensitivity and sharpness of tuning exhibited by the auditory nerve fibers. When the ear deteriorates and the hair cells are

damaged, then you get poor tuning and simple linear behavior as described by Bekesy."

Rhode continues to design unique digital equipment, which has facilitated much of the Department's research. His latest device, a digital generator of auditory stimuli, has been reproduced by personnel in the Medical Electronics Laboratory for 12 outside customers, some from as far away as Australia.

In recent years, Geisler has spent part of his time working on Project Phoenix, a collaborative industry-state-UW effort to produce the world's first digital hearing aid.

Auditory Research— Localization of a Sound Source

Another researcher with an engineering background, Thomas Yin, who is now Associate Professor of Neurophysiology, came to the Department to study eye movements by determining which neurons in the brain are activated when an animal moves its eyes. Although he is now working on this problem very productively, it took several years for his computer-controlled eye-movement laboratory to



Associate Professor of Neurophysiology Donata Oertel sits in front of her slice preparation, where she can monitor a single nerve cell as it is subjected to various stimuli and chemicals.

be fully set up. In the meantime, Yin joined in the auditory work and came up with much new information on how the auditory system correlates time and intensity differences of sounds arriving at the two ears.

Yin and his students greatly extended the earlier work of Rose, Hind and

Geisler on the inferior colliculus. Yin confirmed that some nerve cells respond only when signals arrive in a certain time relation at the two ears. Human listeners can detect as little as a ten microsecond difference in arrival time of sound at the two ears. Such differences in timing constitute one im-

portant cue a listener uses to determine the source of a sound. Another cue that is known to underlie binaural directional hearing is differing sound intensity in the two ears.

Yin is now widely recognized for his contributions on this topic and still continues this line of work.

Another line of research on sound localization concerns the ability of one ear to localize high frequencies. (Psychologists have known for some time that people can accomplish a good deal of localizing using one ear only.) Hind, together with Research Associates Allen Musicant and Joe Chan, are working on a project in which a microphone is placed near the eardrum of an anesthetized cat; a computer-driven arm moves a loudspeaker around in space while sound pressure at the drum is recorded.

“We now understand that much of the localization ability for a single ear can be explained by sharp changes in the sound pressure that reaches the eardrum as a function of the direction of the signal,”

Hind said. “We’re getting results completely in accord with similar kinds of studies done on the human ear in living people.”

Auditory Research— Smaller and Smaller

The most recent investigator to join the auditory program is Associate Professor of Neurophysiology Donata Oertel, who came with a background in invertebrate neurobiology where she recorded signals intracellularly in organisms such as barnacles.

Until Oertel’s arrival, most of the Department’s recordings were performed with extracellular metal micro-electrodes whose tips measure 3 to 5 microns across; these touch the outside

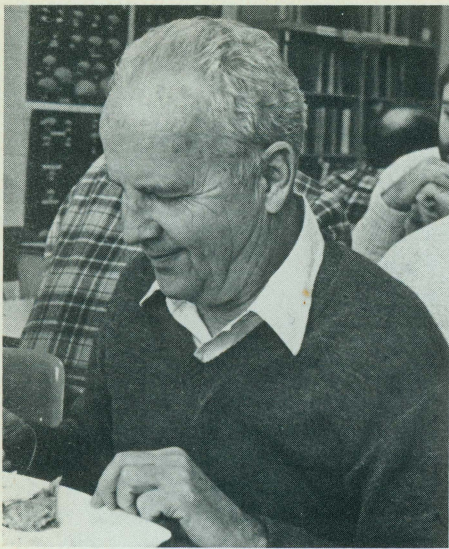
The Waisman Center

The Waisman Center on Mental Retardation and Human Development houses a variety of disciplines, from basic sciences to clinical specialties, that further the understanding, treatment and prevention of developmental disabilities.

Three faculty members from the Department of Neurophysiology—Professors Brugge, Bleier and Berman—carry out their research programs in the Biomedical Research Unit of the Center. Brugge is the Coordinator of this unit.

Terrance Dolan, also a Professor in the Department, devotes the

major portion of his time to his duties as Director of the Waisman Center. “Dr. Dolan has done an outstanding job in bringing the Waisman Center to the forefront among the institutions in the United States which are devoting their efforts to the study of mental retardation and human development,” Dean Brown said. Dolan also is working on projects designed to assess and enhance the development of auditory perceptual skills in young children, including the developmentally disabled.



of a nerve cell, where they pick up signals. Oertel's microelectrodes have tips well under one micron across and can record from inside the cell.

Oertel began to study nerve cells in the mammalian auditory system, initially with Rose and Professor of Neurology Hanna Sobkowicz. Oertel examined cells of the organ of Corti grown in tissue culture by Sobkowicz.

Then Oertel worked with Rhode on intracellular recordings of living nerve cells in the cat cochlear nucleus, the first way-station on the path from the cochlea to higher parts of the brain. This difficult investigation took nearly 4 years, but Oertel and Rhode, with help from Neurophysiology Assistant



In his computer-controlled laboratory, Assistant Professor of Neurophysiology Bill Chiu explores basic properties such as single ion channels in cells with demyelinated lesions. Chiu hopes to better understand the failure to properly conduct nerve impulses in demyelinating diseases.

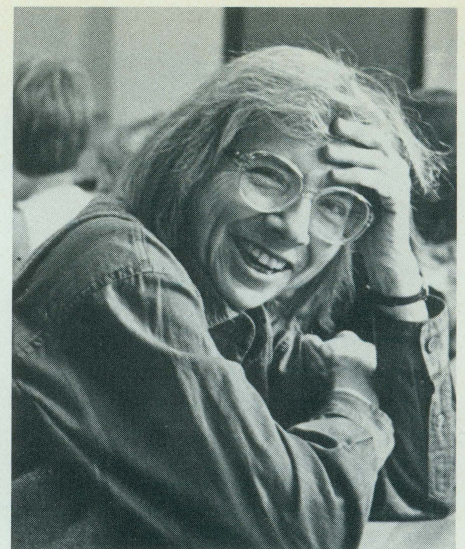


Scientist Philip Smith, completed the most advanced study yet done on these neurons.

They would insert a microelectrode into the cell and record its behavior, including not only the spikes seen with extracellular electrodes, but also the synaptic potentials. After recording they would fill the cells with a dye, sacrifice the animal, and prepare the brain for histological study. Under a microscope they could identify the very cells from which they had recorded and trace the cells' connections. Their work in determining the relationship between a cell's morphology and its physiological properties resulted in two seminal papers. The work still goes on today.

In an effort to have experimental variables under control, Oertel spent several years developing a unique slice preparation of the cochlear nucleus of the mouse—a technique for which she is widely acclaimed among neuroscientists. She is able to take a thin slice of mouse brain and quickly place it into a chamber she developed in which it is held between two pieces of wedding-veil gauze. The tissue is kept alive by flowing oxygenated medium with a precise blend of ingredients at proper temperature around the slice. She can then insert the microelectrode into a cell and record responses to electrical stimulation of the auditory nerve. In this way she can study the behavior of a single neuron under a variety of experimental conditions for hours.

Using the slice, Oertel has described what it is about a cell's properties that make it behave the way it does—firing



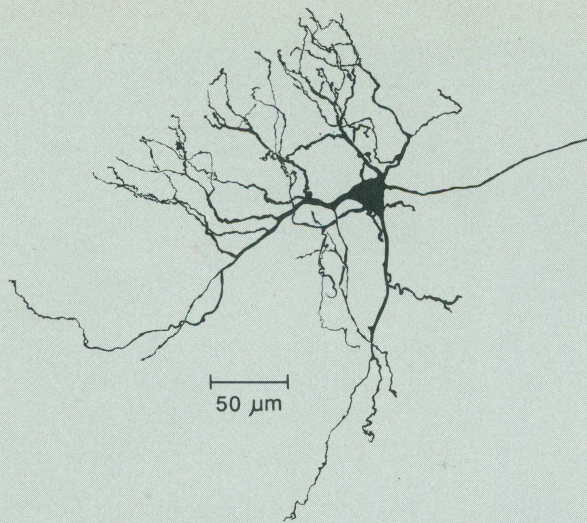
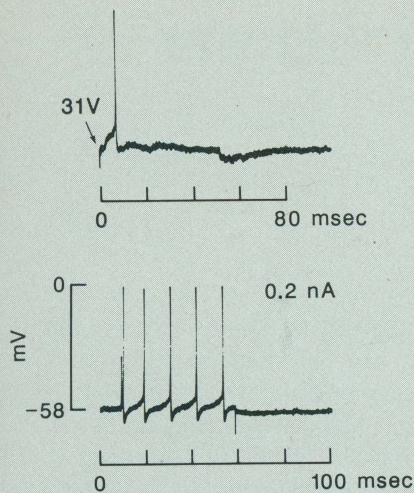
Professors Bob Benjamin (left), Wally Welker (center) and Ruth Bleier (right) enjoy themselves at Winterfest, celebrated on 12/10/86, one of the Department's periodic neurofeasts in which faculty, staff and students join together for good food and good cheer.

many spikes or one spike to a signal, for instance, or responding rapidly or slowly to incoming stimuli. The preparation enables easy testing of the effects of alteration in the chemical milieu of the tissue and offers a convenient approach to study of the neurotransmitters involved in the cochlear nucleus.

Oertel's slice preparation work explains to a large extent the observations made in the intact cat. "We're getting fundamental new information on just how the cochlear nucleus operates—how the different cell classes behave," Hind said. "We've gotten one step beyond the input—the cochlea—and we're starting to understand how the cochlear nucleus processes incoming information about an auditory signal. In other words, we're beginning to understand what the brain is really doing with auditory information."

The Molecular Approach

A relatively new member of the faculty, Assistant Professor of Physiology Shing-Yan (Bill) Chiu, is interested in the biophysics of membranes. In his computer-controlled lab, he studies the way single myelinated nerve fibers depend upon the surrounding glial cells for nutritional support. More specifically, he looks at single ion



This nerve cell from the cochlear nucleus of a mouse was kept alive *in vitro* for about 8 hours. During this time it was impaled with an electrode, and its response to a shock to the auditory nerve (upper trace, arrow) was recorded. The cell fired action potentials when the voltage across the membrane was manipulated (lower trace). A dye was injected into the cell through the electrode, allowing that particular cell subsequently to be found. Its shape, reconstructed with a camera lucida from thin sections, is shown on the right. In making the slice preparation, the cell's axon was cut; it resealed, leaving a little blister (far right).

channels in the myelinated fibers in relation to the glial cells, The channels, Chiu finds, seem to be generated by the glia and then behave as if they were transferred to the nerve membrane.

This intriguing project has direct implications for understanding of demyelinating diseases, and Chiu's work is supported by the Multiple Sclerosis Foundation as well as the NIH.

Teaching

Although the Department of Neurophysiology is primarily a research department, faculty members participate in teaching medical students, graduate students, and postdoctoral fellows.

For many years, Professor of Neurophysiology Robert Benjamin (known for his work on the physiological basis for taste, temperature and pain perceptions) carried full responsibility for teaching neurophysiology to medical students. In recent years, he has shared the responsibility with Berman and Yin of teaching first year medical students in the joint Neuroanatomy and Neurophysiology 714 class directed by Chairman of Anatomy John Harting. Brugge, course coordinator, and Hind also lecture on the anatomy and physiology of the peripheral auditory system in the Special Senses-Ear

course presented to second year medical students: this basic information is closely integrated with presentations by faculty from the clinical sciences—ENT, Speech and Hearing, Rehabilitation Medicine, and Communicative Disorders. In addition, the Department presents graduate courses in such areas as cellular neurophysiology (Oertel) and auditory neurophysiology (Geisler).

Several Department faculty are very active in the campus-wide Neuroscience Training Program. Currently the Department has 6 postdoctoral fellows and/or Research Associates and 8 graduate students doing thesis research, although some of these students will receive their degrees through another department, such as Electrical and Computer Engineering.

Auditory Research— A Government Assessment

The following excerpt from an NIH Study Section statement on the Department of Neurophysiology's most recent Auditory Program Project grant renewal application shows how NIH regards the Department's research. (The grant provides support for 6 faculty in audition.)

"This program project represents the confluence of a group of excellent

investigators and a number of significant projects.

This group constitutes a valuable national scientific resource with a well-deserved and well-established international reputation.

During the past 20 years it gained a leadership position in many areas of auditory neurophysiology. The department may well be one of the top establishments in the consistency, quality, and productivity of its research. It also has been one of the major training institutions in the field.

"The group possesses the necessary breadth and depth, coupled with superb supporting staff and excellent physical facilities, to insure a continuing leadership position. The strengths of the group are conspicuous, while the weaknesses are few. The interactions among investigators and the interrelationships among the projects are such that the program project-type support is fully justified. The committee recommends continued support of this fine program."

Q

photos by T.A. Stewart



PRESIDENT'S COLUMN

Walter R. Schwartz, M.D. '55

This will be my final column since the thirty-sixth term of office of the President of the Wisconsin Medical Alumni Association is coming to a close.

Just as my predecessors must have felt at this stage of their presidential term, I too feel grateful for the honor and privilege of serving as your president and, yes, even some regret that the term is ending. The experience has been uniquely rewarding. I have had the opportunity to interact with students, with the Dean and a dedicated faculty and to meet many of you at regional and national meetings.

Primarily, I have felt a sense of pride and gratification to be, for a time, the president of an association that has contributed significantly to improving the lot of the medical students and to improving the teaching milieu of the medical school—and to know that we shall be contributing even more significantly in the future.

A successful program of these dimensions does not flourish without the effective efforts of many people: members of the Board of Directors, Committee Chairmen and their committee members, the *Quarterly* Editor and Editorial Board, the scores of Representatives and the dedicated, efficient staff of the association. I thank you all.

I am keenly aware that the excellent

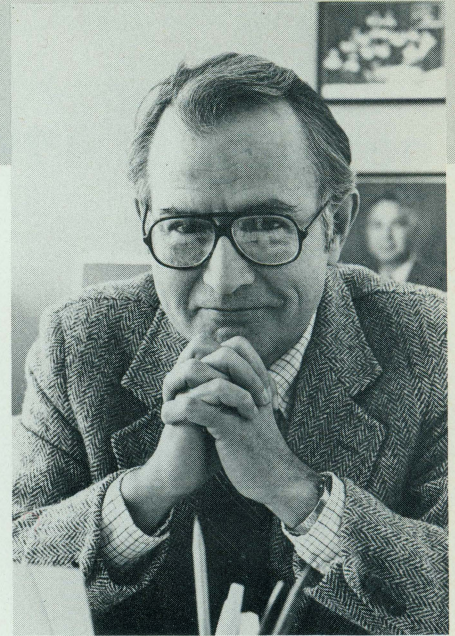
work of my predecessors in the presidency has made my job much more easy and enjoyable. Also, I feel that the Association is fortunate to have an able successor to the presidency in Ted Fox, who is ready to assume the reins of office for our 1987-88 year on May 15, and who, I am confident, will lead the Association to new heights of productivity and significance. While I express heartfelt thanks to the members of the Board, the officers, the representatives and the staff, I am well aware that it is you, the individual alumnus, who determines the success of all of our medical alumni programs.

Your attendance at alumni meetings and class reunions, your participation in our annual Alumni Day festivities (the date is May 15 this year) and your generous contributions to the annual fund are the determinants of the Association's success. Valuable financial aid has been provided to more medical students and a new program of alumni professorships has been implemented because of your generosity. Both programs require ongoing and expanded support, which I am confident, will be forthcoming from you.

Thank you for the opportunity to serve as president of such a meaningful organization. One that is meaningful because you make it so. Q

DEAN'S COLUMN

Arnold L. Brown, M.D.



Not since the late 1950's and early '60's has there been such concern expressed over the medical curriculum. The ferment then, which bubbled most actively at Western Reserve (now Case Western Reserve), resulted in the organ system approach to basic science education. This was adopted by just about all the schools, including Wisconsin in 1967. Our second year was given over to team-taught courses in hematology, infectious disease, cardiovascular, eye, and the rest. This has worked well except that the basic science faculty has felt that the students did not receive an adequate grounding in their subjects. I agree.

Another important change occurred in the early 1970's when the medical faculty, along with other faculty in Madison and across the country, came to agree with the students that too much of the curriculum was directed, that it was too inflexible. The result was a nearly entirely elective fourth year.

Along about 1980 it began to occur to some medical educators that the effect of all this was an increasing emphasis on narrow specialization. Concern was growing that our students were being deprived of a general education in medicine. This culminated in 1984 in the publication of a report called, "The General Education of the Physician," which was critical of the curricular approach that the medical schools had taken and urged reform.

This had the effect here of initiating an intense review of our curriculum headed by Charles Lobeck, the Associate Dean for Academic Affairs, former chair of Pediatrics here, former Dean of the University of Missouri Medical

School, and a highly respected medical educator. Central to this review, which is proceeding at full steam, is the Educational Policy Council chaired by Ted Goodfriend.

An element in this review, but also as an occasion for the faculty to engage in a day-long discussion of their ideas on how to best to prepare our students for their lives as physicians, Dr. Lobeck conceived of a Medical Education Day. With the help of Howard Stone that is just what happened, and Jackie Kelly describes it elsewhere in this issue.

It became clear during the course of the day that we have some very creative and forward thinking faculty members. And a good share of them are from outside of Madison. They come from the Milwaukee Clinical Campus at Mt. Sinai Medical Center, from the Marshfield Clinic, from the Gunderson Clinic, and from our preceptors. Prominent also were those from the Department of Family Medicine and Practice, both those in Madison and from the programs in Appleton, Wausau, and Eau Claire. All of them, along with the indefatigable Tom Meyer, recognize that changes, even radical ones, must now be made in how we think about clinical education and how we do it. They offered some interesting and workable ways of doing just that.

Change, however, is uncomfortable for some and anathema to others. But change we will. The thoughts and ideas expressed at Medical Education Day along with the intensity and creativeness of the curricular review make change inevitable. The only question is when. **Q**

The Class of 1990

Vic Falk, M.D., '39



The Class of 1990—how many, how old, how smart, what color, what background, and what's the future of the class?

The number of applications for Medical School has decreased sharply in this decade. Prior to 1982, the number had been quite stable. In 1981 there were 532 applications and 489 of these were completed by residents of Wisconsin. In 1986 there were 394 applications and 363 completed by Wisconsin residents. The number of nonresident applicants dropped from 800 to 700 this past year. Of these, only 134 completed the application process and competed for the seven nonresident places that are available. In 1980, there had been 331 nonresident applications completed. The policy of the Board of Regents is that at least 95% of the entering class positions must go to residents of Wisconsin.

The 1986 entering class consists of 147 students coming from a group of 213 accepted applicants. The ages range from 20 to 36 and 36% of the class is female. Forty-two percent attended UW-Madison as undergrad-

uates. There are 15 students from rural Wisconsin and 13 students from disadvantaged backgrounds—five black Americans, two American Indians, one Mexican American, and five Caucasians. The mean class grade point average of applicants was 3.57 for science and 3.60 total. (A 4.0 average is straight A and 3.0 is a B. Years ago a 3.0 average was straight A and 2.0 was a B.) One wonders if current students are all doing that much better than our averages of years ago or if grading is a bit more relaxed. There have been indications that this may be true.

The Admissions Committee has participated in the early decision program since 1979. This program allows applicants to apply to only one school and commits them to that school if accepted. The committee believes that this attracts and commits well qualified Wisconsin residents to the UW. However, the number of applicants has decreased from 65 in 1980 and 1981 to 29 this year. In 1981, 41 of these applicants were accepted and this year it was only 18.

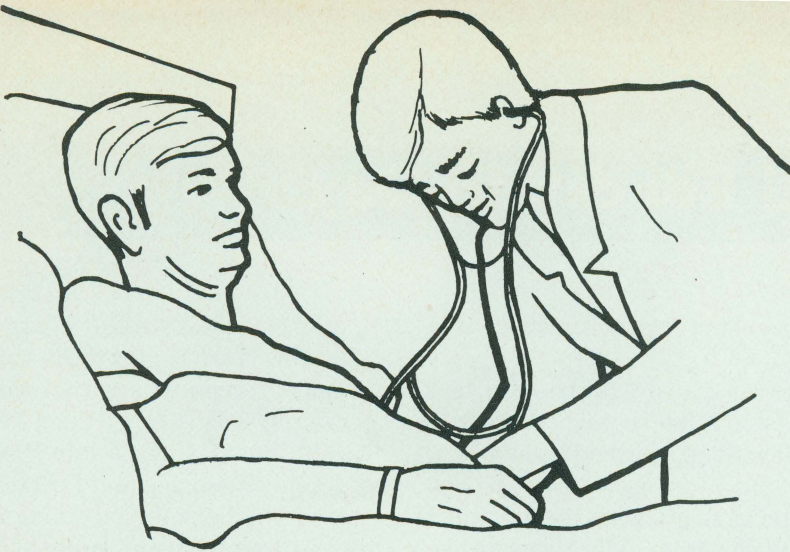
For the past ten years, the Medical School has offered applicants the option of delaying their entering the freshman class for one year. This year 22 individuals chose that option. Most of those opting for the delayed admission express the desire for some "breathing room" before tackling medical school and have plans to work, travel, catch up on reading, participate in a research project, or any combination of the above. In the past this has resulted in a few deciding not to enter medical school after their year off. The Admissions Committee considered 16 Wisconsin residents who had completed their basic sciences at foreign medical schools and transferred for the three available third year places. Of

the three accepted, two were from the American University of the Caribbean and one was from Guadalajara.

Ten medical scholars were admitted to the 1986 first year class and nine of these enrolled. These nine were not required to take the MCAT but were required to meet a specified grade point average for admission.

The applicants came from 144 different colleges and universities, including four foreign colleges. Their undergraduate majors ranged from agricultural and art to English, nursing, philosophy, physical education and veterinary. Strangely enough, there were only five applicants who listed premedicine as their undergraduate major. There were 109 applicants from Dane county, 74 from Milwaukee county, and 38 from Waukesha county. The remainder were widely scattered around the state.

The premedical requirements have changed over the years. "Only very outstanding applicants will be accepted after the equivalent of three years of undergraduate education." "A sound background in biology, chemistry, physics, and mathematics" is required. The minimal requirements for admission are a semester each of general zoology and advanced zoology and one or more of the following is considered of benefit: cell biology, developmental biology, comparative vertebrate anatomy or genetics. Inorganic chemistry and organic chemistry are both required and a course of quantitative analysis is recommended but not required. A semester course in biochemistry is considered beneficial. Two semesters of general physics are necessary and in mathematics there is a minimum requirement of college algebra and trigonometry and calculus is recommended. A course in English stressing composition is also con-



sidered in the admission process. The committee further noted that "a sound general education also includes courses in the humanities and social sciences and should include courses in these areas so as to prepare for the social, psychological and economic aspects of medical practice."

The emphasis on math is a change from the requirements of years ago. (With these math requirements, I'm sure I would never have gotten beyond the premed phase of my education.) Missing from the current requirements are the foreign languages. Latin was formerly a routine requirement and in my own situation I began working this off in junior high school. Judging by the suffix problems encountered in reviewing scientific articles, a return to that basic language might not be a bad idea. Years ago many of us took up to six semesters of German culminating with chemical and medical German.

Now, what's in store for the Class of 1990? There were two articles in the December 26th JAMA* indicating that young physicians face an uncertain future. They expressed concern about the escalating cost of medical education and more expensive loans. There is also increased pressure to limit the growth of physician supply by reducing medical school class sizes and closing some U.S. schools and reducing the number of graduate medical training positions. Economic pressures would lead some teaching hospital to eliminate or reduce the size of their residency programs. Competition for residency positions would intensify. Young physicians would have more difficulty getting started than did their prede-

cessors, partly because of their higher educational debts, and joining existing practices would become more difficult. It is anticipated that more young physicians will initially become salaried, although later on they may enter private practice. Physicians will be forced to assume more risk in every aspect of their practices in the choice of special-

ty and location as well as professional liability.

It is predicted that the economic pressures are bound to create friction among physicians as colleagues become competitors. The status of the medical profession could decline and the profession could become a trade and incomes may fall. Also, physicians are likely to lose their exclusive authority over clinical decisions. It is also predicted that there will be an increasing separation between those who make economic decisions and those who make clinical decisions in medicine.

Despite all these potentially adverse consequent position, innovations of medical education, technology, and organization of medical practices will continue to improve the ability of physicians to provide high quality medical care to their patients. Q

Interim Progress Report on Annual Fund Campaign

John Brennan
Annual Fund
Campaign Chairman

Reading lists of any kind are not a favorite pastime, but I find the following list quite impressive: scholarships, loan funds, awards for student accomplishment, visiting professorships, lectureships, a medical library building, a renovated auditorium, funds for student amenities, two \$3,000 faculty teaching awards and a \$500 resident teaching award. All of these are examples of the benefits made possible by alumni contributions.

It was a proud moment for the entire medical alumni body last May when Professor of Pathology and Laboratory Medicine, Enid Gilbert, was named the first Medical Alumni Professor in recognition of her well documented teaching excellence.

We have committed ourselves to the support of three medical alumni professors over a period of three years. With this program we are, in a tangible way, improving a deficient reward system for teaching excellence which exists in most of academia.

Because we have made this new commitment does not mean that we have diminished our efforts to provide increased student financial aid so that a medical education may be a reality for dedicated and talented young men and women from every socioeconomic level.

We have taken a risk. We are counting on more of you exercising the privilege of giving to the annual fund campaign to support these worthy goals. It is encouraging to note that we have experienced a healthy increase in the number of contributions (over one hundred more) and that more of the recent graduates who have benefitted most from previous alumni contributions are recognizing their obligation to benefit their successors.

Our goal of \$600,000 for the 1987-88 year can be achieved if each of you contributes to the extent that you are able. When we meet on Alumni Day, 1987, May 15, I expect to be able to announce that we have met or exceeded our goal. Q

Medical Education Day

The Medical School held its first Medical Education Day, devoted to the Clinical Education of Medical Students, on February 6.

Sixteen speakers, most of whom teach medical students during their clinical years, exposed the audience of Madison-based faculty and UW clinical faculty from clinical campuses throughout Wisconsin to a variety of current and proposed educational programs and thought-provoking philosophies. Although each speaker addressed a pertinent aspect of clinical education and evoked incisive questions and comments from the audience, space limitations require that we review a sampling of the presentations to give *Quarterly* readers at least a glimpse of what may lie ahead in the clinical education of medical students.

Director of Continuing Medical Education and Professor of Pediatrics **Thomas C. Meyer** wondered if we are guilty of educational malpractice: the forces of technology and cost containment, and the revised understanding of the therapeutic needs of patients have severely compromised the quality of the traditional clinical education of 3rd and 4th year students—educational design has not kept pace with everything else. The patients the 3rd year student sees in a university hospital, for example, hardly show the student what life is really like, for they often represent illness on top of decay—very complex cases for a student to unscramble, especially when he has such a short time to adapt to each new rotation; both faculty and students are too rushed, the patient mix is inappropriate, the patient can be viewed as dehumanized, and students are afraid to admit they don't understand something because they aren't sure when they're being taught and when they're being evaluated. (Other speakers also mentioned that a tertiary care center, especially in recent years, is not an appropriate setting for 3rd year students.) The 4th year is driven by the

residency hunt, with its stress and distraction.

Meyer suggested that the third year should be in a full service community hospital with an attached clinic where faculty more precisely plan, coordinate, and evaluate what is taught and students can more fully relate to patients and learn the ropes. Fourth year should be primarily spent at a university hospital, which can provide greater depth of teaching to students who have had a broad experience. These changes would lead to a more logical progression from the basic science years to graduation. Now we have irritable, exhausted, unhappy students because we cut their experience into little pieces and put them under a great deal of unnecessary tension.

In a videotape presentation, Clinical Associate Professor of Medicine (Marshfield) **John P. Kirchner** illustrated how "Instructor Plays Patient," a method in which the clinical teacher pretends he is the patient and the medical students ask him questions. In this way students learn how to manage clinical problems by engaging in the higher-level mental operations involved in clinical problem solving—with no risk to the patient.

Chairman of Family Medicine and practice **Eugene S. Farley** said that adequate data collection, organization and analysis for appropriate decision making and intervention are the basis of medical education, research, and care. He would like to see medical students fill out an index card for each patient they encounter throughout medical school—pink cards for females and blue cards for males—and file them according to date of birth. Right away, the student would be assembling his own age/sex registry and would begin to study statistics, epidemiology, and the socioeconomic aspects of health care. The card method facilitates student learning and recall, and helps in the evaluation of a student's clinical experience—has the student, for ex-

ample, somehow missed a large area of experience? Farley feels that this simple procedure is a tool that can serve physicians all of their lives.

John Beasley, Associate Professor of Family Medicine and Practice, discussed another method—a computerized encounter-monitoring system—used by the Department to follow the progress of 3rd year medical students on their family practice clerkships. The card system, which relies on the use of mark-sense computer cards that are frequently read by an optical reader, has proved useful in maintaining academic structure and quality control as well as continuity and relatively rapid feedback for students located in areas geographically remote from the University. The Educational Policy Council and the Clinical Years Committee have overwhelmingly approved the clerkship; acceptance by the students also has been good.

Assistant Professor of Family Medicine and Practice **William Schwab** described a Family Practice rotation in which a student is assigned to a patient with developmental disabilities; such a model helps develop the primary care physician's critical skill in managing patients with chronic illnesses in the outpatient setting. Students must report on their patients (whom they see in at least three different settings), including the impact of social and psychological issues, and prepare a plan for the ongoing care of the patient. Students who have gone through this rotation report profound emotional reactions and felt they have made a difference in the life of the patient and his family through continuity of exposure and experiences. (All 7 students said they would maintain some level of contact.)

The final speaker, **Gerald Perkoff**, Professor of Family and Community Medicine at the University of Missouri/Columbia, hoped for a return to the hands-on, wet lab approach to the teaching of the basic biological sci-

Distinguished Service Award Recipient

JOHN R. PETERSEN '54

ences, the lynch pin of our system of diagnosis and treatment. In the clinical years, a basic grounding in clinical reasoning—the single most important and useful tool of an excellent medical education—can be achieved only by repeated and intimate involvement in supervised patient care of the highest quality.

Because of the changed environment in teaching hospitals and the fact that patients are becoming increasingly less willing to be admitted to such a hospital, where they believe the teaching process necessarily means second-class care, more attention must be paid to patients. Reluctance can be overcome by good performance and supervision in the teaching hospital. Also, patients could be offered the choice of: 1) private medical care with no students at full price, or 2) teaching medical care with guaranteed firsthand supervision by faculty at significantly discounted prices, where the patient is a willing partner in the teaching process; the patient could be reimbursed for the extra time he has given; and patients who contribute the most to teaching could be publicly honored. We could also include patients on curriculum planning committees, for we have heard much from patients about deficiencies in what we teach medical students.

Since all this costs money, we should expect the higher-earning departments to contribute more—education is a school-wide activity—and we need to justify increased state support. We should also lead the way in innovative care such as providing transportation from remote areas to teaching hospitals, and perhaps establishing clinics in shopping centers where medical personnel could periodically helicopter in.

Think ahead, for we won't be able to keep everything as it is now, no matter how hard we try. The best defense is a creative offense. **Q**



President Schwartz presents Distinguished Service Award plaque to John R. Petersen '54.

John R. Petersen of Wauwatosa received the Association's Distinguished Service Award for 1987 in recognition of more than a quarter century of exemplary service to his community, to the state and to medicine and medical education.

John has fashioned a career of enviable accomplishment as Director of Medical Services for the Milwaukee County Medical Complex and Associate Dean of the Medical College of Wisconsin; as a key member of the Governor's Health Policy and Planning Task Force and Health Policy Council, and as a member of the Board and Executive Committee of the Board of the Southeastern Health Systems Agency.

He was instrumental in developing the Milwaukee International Health Training Center to meet the primary

health care needs of developing countries and has been intimately involved in pursuing economic development for southeastern Wisconsin.

His leadership brought to fruition the development of a coordinated program ensuring access to medical care regardless of ability to pay, while his skills as an organizer and negotiator were critical to the feat of integrating the number of diverse institutions into the Milwaukee Regional Medical Center.

John has served the Medical Alumni Association as a member of the Editorial Board, the Board of Directors and as President, in which role he contributed significantly to broadening the vision and raising the goals of the Association.

His colleagues and co-workers uniformly cite John's dedication to high



▲ Three Generations of Petersens: Catherine (Mrs. Robert), Yvonne (Mrs. John), Anne, Robert, David, John

Ann Bardeen '45 ►
Helen Dickie '37
Joseph Wepfer '45
Mrs. Joseph Lalich
Joseph Lalich '37
Ruth Dickie
Milwaukee Winter Meeting
January 18, 1987



standards, his productivity and his concern for others which is exemplified by his commitment to providing quality medical care for everyone needing it.

John's thoughtful comments in accepting the award follow:

"Dr. Schwartz, fellow alumni, friends, faculty and my dear family: It is very difficult for me to find words adequate to express the feelings I have as a result of being chosen to receive the University of Wisconsin Medical Alumni Association Distinguished Service Award for 1987. To join the ranks of prior recipients of this honor, such as Drs. Leonard, Copps, Larme, and Beno is a thought-provoking experience, for I am aware of the significant contributions they have made to medicine and in their communities. I do, indeed, feel honored and wish to state

that I will not rest upon past achievements but rather will attempt to demonstrate that the confidence of those making this selection was not misplaced.

I came to the University of Wisconsin Medical School with values and experiences which I believed then, and even today, to be important to meeting the heavy but very satisfying demands of a career in medicine. During my four years in the Medical School, these values were reinforced and given sharper focus through the efforts of the School's faculty but also through interactions with fellow students. We studied and learned together, we played together and, sometimes, we hurt together also.

I vividly recall being summoned from the second floor window of the white house that served to office the

Medical School Dean, William S. Middleton, one or two days after graduation. Even though the graduation process had been completed, many of you here will know the kind of emotion promptly experienced under such a circumstance. What transpired in his office has remained with me during these past 35 years.

Dr. Middleton called me into his office, suggested that I take a chair, which my memory seems to have been rather unusual in and of itself, and proceeded to say, "I think you would like to sit in my chair, beginning right now. I want to say to you that if there were any way that I could arrange it, it would be done, for you, during your career in medicine, will have the privilege of being part of and experiencing developments in medicine which will make past achievements

◀ President-elect
Ted Fox '57, Mrs. Fox
and Sanford Mallin '57

Loron Thurwachter '45 ▶
Frank Urban '54
Roger Laub-
heimer '50
Mrs. Thurwachter
Mrs. Urban



◀ Will Wiviott '57
Mitzi Wiviott
Mrs. Meyer
Glenn Meyer '60

pale. I would like to be there too, but know that that cannot happen.”

With that comment I left for Philadelphia and my internship at Philadelphia General Hospital, Old Blockley, as Dr. Middleton called it, and following a stint in the military, completed training in General Internal Medicine and a fellowship in Endocrinology/Metabolism. I mention this since the activities in which I have been involved and which I understand form the basis for receiving the award today are hardly those which one would anticipate, based upon my educational and training background. A long time career in Medical Administration never entered my mind and in those days, if it had, I am certain I would have dismissed it as a wild and inappropriate fantasy. But I did move in that direction and discovered to my surprise that the

lessons I had learned at home, in college, in Medical School and in my subsequent training were applicable.

Basically, I learned that objectivity, fairness, looking ahead, and always caring were the “stuff” of effective administration, whether in my efforts to improve quality and access of patients to Milwaukee County’s public hospital, to strengthen that hospital’s relationship with the Medical School, or in my efforts in southeastern Wisconsin and with the State pertaining to health planning.

While in Medical School I learned that the practice of medicine required great discipline and that it was not easy. There are many things I would like to talk about this afternoon but foremost in my mind is the future of medicine and its complex institutions. The thought I would like to leave with

you is simply this—if we can assure that logic and rationality drive the practice of medicine, meaning that our use of diagnostic and therapeutic interventions is disciplined, we will serve our patients as effectively as current understandings and technology permit. Further, I believe we will serve them compassionately and at a cost that will seem to be affordable.

My main point is to suggest that quality medicine, through disciplined practice and cost containment, are the same thing. I have tried to articulate this view in a variety of arenas in recent years and will continue to do so whenever the opportunity presents, as it has today.

Again, thank you. I am pleased to accept this award and truly do feel honored.

Q



President

Theodore C. Fox, a '57 graduate of the Medical School, is a UW Clinical Assistant Professor of Family Medicine and Practice. In 1985 he was honored for his work by receiving the Family Physician of the Year Award from the Wisconsin Academy of Family Practice. Ted is past president of the Wisconsin Academy and has served as Chief of Staff of Langlade Memorial Hospital and as a member of the Wisconsin State Medical Society's Commission on Governmental Affairs. And he has served on the WMAA Board of Directors since 1983.

Board certified by the American Board of Family Practice and a member of the National Academy of Family Physicians, Ted has practiced medicine in Antigo since 1963.

Ted and Barbara have eight children, five boys and three girls.



President-Elect

Samuel G. Perlson has several ties with the Medical School. He graduated in 1951, completed his residency in Obstetrics-Gynecology at UW, and has been Clinical Associate Professor of Ob/Gyn at UW as well as at the Medical College of Wisconsin. Sam also has served as President of the Milwaukee Gynecology Society, President of the Wisconsin Society of Obstetrics and Gynecology, Chairman of the Wisconsin Section of the American College of Obstetrics and Gynecology, and Chairman of the Department of Obstetrics and Gynecology at St. Michael's Hospital.

Sam has provided WMAA leadership in his arranging of the Annual Milwaukee Medical Alumni meeting and in chairing the Tour Committee.

Recently retired, Sam now devotes his time to taking classes at UW-Milwaukee, and he continues to teach medical students on rotation at Mt. Sinai.



Nominee for District I

Joanne A. Selkurt, Clinical Assistant Professor in the UW Department of Pediatrics, earned both her B.S. (1964) and M.D. (1968) at UW. After a rotating internship in Atlanta and employment in Washington and Tahliquah, Oklahoma, Joanne returned to UW for her residency in Pediatrics and has remained in Wisconsin. Since '72 she has been affiliated with the Gunderson Clinic, the past several years at Whitehall.

Joanne received a Distinguished Teaching Award in 1977, the first year the awards were granted to faculty members from other than the Madison campus. She received the honor again in 1978.

Joanne has two daughters and is active in Girl Scout activities. She also directs a church choir and participates in other local organizations as well as the State Medical Society and the American Academy of Pediatrics.



Nominee for District II

Henry C. Rahr, a '58 graduate of the Medical School, has been practicing family medicine in Luxemberg, WI since 1959. He took further training at St. Luke's Hospital in Duluth, Minnesota.

Henry is Chairman of St. Vincent and Bellin Memorial Hospital's Credentials Committee and Past President of the Brown County Medical Society.

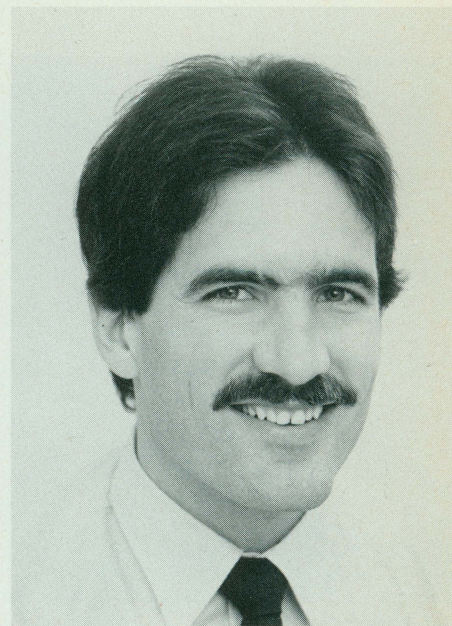
A life member of the WMAA, Henry is a Diplomate of the American Board of Family Practice, a Fellow of the American Academy of Family Physicians, and a former member of the Board of Directors of the Wisconsin Academy of Family Physicians.



Nominee for District III

James R. Ferwerda received a B.S. in physics from Beloit College and his M.D. from the Medical School in 1957. After a rotating internship at Philadelphia General Hospital, Jim spent two years as a general practitioner, followed by a residency in Ophthalmology at Milwaukee General Hospital. Ever since, Jim has had a solo practice in Ophthalmology in Kenosha. He has served as Chief of Staff at St. Catharines Hospital and currently is a member of the Board of Trustees of Beloit College.

Wife Connie is very active in the home health care and Hospice movement in Kenosha as well as a member of the UW-Parkside Foundation. The Ferwerdas have three children, all now attending college.



Nominee for District IV

Patrick McBride, Assistant Professor of Family Medicine and Practice and of Medicine (Cardiology Division), graduated from the Medical School in '80 and became Board Certified in Family Practice in 1984. Pat also directs the DeForest Area Medical Clinic.

Pat is particularly interested in sports medicine, preventive cardiology, cardiac rehabilitation, and health education. He recently received a five-year grant from the National Heart, Lung and Blood Institute to develop the curriculum for teaching the prevention of cardiovascular disease. This NIH preventive cardiology academic award is given to a medical school only once.

Pat's son Sean is nearly a year old.

Q



Ira R. Sisk

Dr. Ira Sisk Memorial Fund Established

The family and friends of pioneer urologist **Ira Sisk**, who was the first UW Chief of Urology, have established a memorial fund which will be used to support an annual medical student award to be given to the student with the most outstanding performance in urology.

Dr. Sisk died on November 23, 1986 at age 93. He received our Emeritus Faculty Award in 1983 in recognition of his singular and diverse contributions to UW medical education.

Contributions to the Ira Sisk Memorial Fund may be sent to the Wisconsin Medical Alumni Association, Room 1250, M.S.C., 1300 University Avenue, Madison, WI 53706.

Woolsey Lecture Highlights Symposium on Cellular and Integrative Neurobiology

The twelfth **Clinton N. Woolsey** Neuroscience Lecture was delivered March 27th by Dr. **Richard Thompson** of Stanford University, who spoke about his work on the neuronal sub-

strates of learning and memory. During the day, students and staff presented summaries of their work in various areas of neuroscience. This form of mini-symposium on cellular and integrative neurobiology was successfully instituted last year to accompany the Woolsey lecture.

Colleagues, former students and friends have been honoring Clinton Woolsey for his major contributions to neurobiology and to the Department of Neurophysiology by sponsoring the Clinton N. Woolsey Lecture in Neuroscience for the past 11 years. The lectureship brings distinguished scientists to the University to further, through the exchange of information, the advance of neuroscience.

DOC in Madison

—by Laurie Lindblom, Med II

Adolescence is a time of great physical and emotional change, and the ways some teenagers cope can end in tragedy. Grim statistics for teen substance abuse, pregnancy and suicide recently prompted the AMA to initiate an adolescent health program, with the aim of prevention through teaching and support.

One University of Wisconsin group has focused on the concerns of young people since its beginnings in 1977. Members of Doctors Ought to Care (DOC), a volunteer organization of medical students and physician's assistant students, help promote health attitudes among area 7th to 12th graders. Using a variety of visual aids and group activities, pairs of DOC volunteers speak on four topics: sexuality (including STDs, pregnancy prevention and decision making), alcohol and other drug abuse, suicide, and eating disorders. Other topics may be added as they become timely.

Techniques for presentations vary with the subject and special needs of each group. A talk on birth control might use anatomical models and a

demonstration of devices; the topic of suicide could involve a group discussion to bring out feelings and concerns.

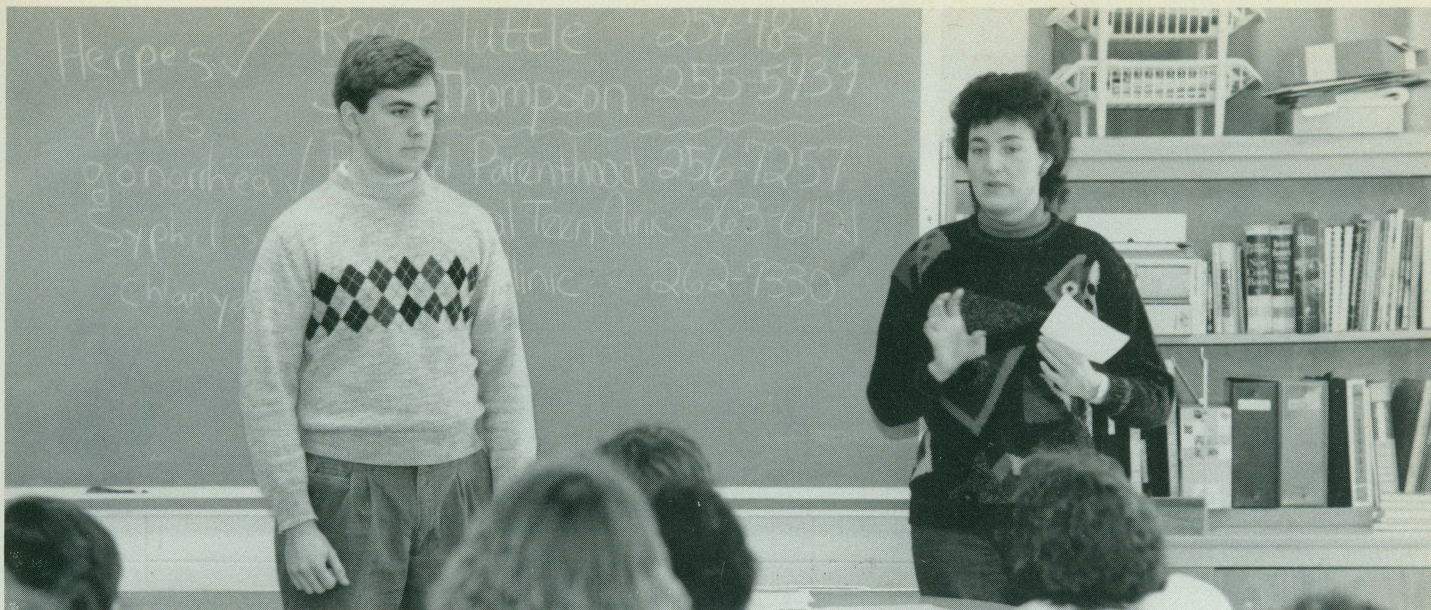
Some volunteers request anonymous written questions from students to elicit questions too embarrassing to ask out loud. Such candid questions also help point up misconceptions held by students and give DOC speakers a chance to learn what's going on in the lives of teenagers.

Personal anecdotes and humor help make the volunteers approachable, and the attitude is always objective—to give the facts, not to wag fingers. DOC speakers also present a unique change from other community resources. "DOC works because the members are close enough in age to the students to gain their respect, yet at a point in their education where they're considered 'authorities' on the topics they present," says Elizabeth Ciurlik, medical student co-coordinator.

Responses to DOC, gauged by feedback forms from students and teachers, have been overwhelmingly positive. And the teenagers aren't the only ones to find the talks worthwhile. "There are obvious benefits, like developing public speaking skills and looking at these topics from a different perspective than we're given in medical school," says co-coordinator Ross Lange. "But there is also the satisfaction of helping people solve problems, and making a difference in someone's life."

DOC participants are trained in their subjects by specialists from the University and community agencies such as Planned Parenthood and the Dane County Mental Health Center. Referrals to outside resources are an important part of DOC's effectiveness.

DOC was created in 1977 by Dr. Alan Blum, then a family practice resident in Florida, and has become a nationwide organization with over 50 chapters. On a national level, DOC emphasizes changing legislation and com-



Medical students Renee Tuttle and Jeff Thompson talk with 7th graders at Van Hise Middle School in Madison.

batting the unhealthy advertising of tobacco and alcohol companies. The UW group plans to join the national anti-smoking campaign by posting billboards and/or bus ads depicting smoking in a completely unglamorous light.

In the past year and a half, Madison's 70 or so volunteers gave 236 talks, reaching over 6,700 young people. With support from the UW Hospital and Clinics and the Medical School, and the enthusiasm of its volunteers, DOC in Madison can continue spreading the work and helping teenagers grow into healthy adults.

Health professionals or students interested in forming a DOC chapter can contact Madison DOC Program Administrator Kristin Martin at the UW Hospital and Clinics, Department of Training and Education. Information on the national organization can be obtained from the DOC national office, Medical College of Georgia, Augusta, GA.

Correction

In the last *Quarterly* we misspelled the name of Professor of Human Oncology **George T. Bryan**—twice. We apologize. Bryan directs the General Clinical Research Center, which has been awarded a three-year, \$2.7 million NIH grant for research and training in patient care. Q

Necrology

Otto A. Backus, '29

Tucson, Arizona
October 18, 1986

John V. Blady, '32 (2 year)

Bryn Mawr, Pennsylvania
November 24, 1985

George L. Boyd, '33 (2 year)

Kaukauna, Wisconsin
September 11, 1986

Helen Pratt Davis, '27 (2 year)

Tempe, Arizona
September 27, 1986

Horace J. Hansen, '31

Sheboygan Falls, Wisconsin
September 7, 1986

Robert M. Hansen

(former resident Otolaryngology)
Portland, Oregon

Chester T. Johnson, '40 (2 year)

Decatur, Illinois
August 27, 1986

Martha Kohl, '30 (2 year)

Arcadia, California

John F. Koppa

(former resident Psychiatry)
Madison, Wisconsin
January 10, 1987

Lawrence O. Lund, '55

Denver, Colorado
August 5, 1986

Fred A. Parish, '31 (2 year)

South Yarmouth, Massachusetts
October 27, 1986

Gertrude Puestow

(wife of Emeritus Professor of
Medicine Karver Puestow)
Madison, Wisconsin
January 26, 1987

Kenneth M. Sachtjen, '55

Madison, Wisconsin
February 26, 1987

Marvin F. Stricker, '35

Stuart, Florida
January 3, 1987

John H. Turgeson, '53

Madison, Wisconsin
January 14, 1987

Benjamin R. Van Zwalenburg

(former intern)
Grand Rapids, Michigan
April 17, 1986

Henry E. Vogel, '31 (2 year)

Buffalo, New York
March 6, 1986

Harry F. Weisberg

(UW Professor [L/I], Pathology and
Laboratory Medicine—Mt. Sinai
Medical Center)
Milwaukee, Wisconsin

Faculty News



Folkert O. Belzer



Howard Temin



David Dibbell

John Wiley & Sons has recently published a new book by Chairman of Medical Physics **Frank H. Attix**, "Introduction to Radiological Physics and Radiation Dosimetry." The book is intended as a text for an introductory course at the graduate or senior undergraduate level.

Professor of Neurophysiology **John F. Brugge** has been selected to receive a special award for research in the neurosciences requested by the U.S. Congress to honor the late Senator Jacob K. Javits of New York. The award is given to a researcher with a distinguished record of substantial contributions in neurological sciences who can be expected to be highly productive over the next seven years. The seven-year NIH grant will total \$765,995.

Brugge studies the development of the auditory system, especially in the higher levels of the brain such as the auditory cortex.

A.R. Curreri Professor and Chairman of Surgery **Folkert O. Belzer** has been selected to receive an NIH Merit Award. The NIH has recently begun to offer a limited number of Merit Awards to selected investigators who have demonstrated superior competence and outstanding productivity in

their research endeavors. The award's objective is to provide long-term stable support to such senior investigators who are likely to continue to perform in an outstanding manner.

Professor of Oncology **Howard Temin** was awarded the first Hilldale Award in the Biological Sciences for excellence in teaching, research and public service. The award represents peer judgement by colleagues within the winner's faculty division. It includes a \$5,000 stipend through the Hilldale Fund.

Professor Temin told the *Quarterly* that it was particularly gratifying to receive such local recognition, which has special significance because it comes from his colleagues. He also observed that this is a critical time for the University, which is facing numerous challenges to maintaining its quality and its mission.

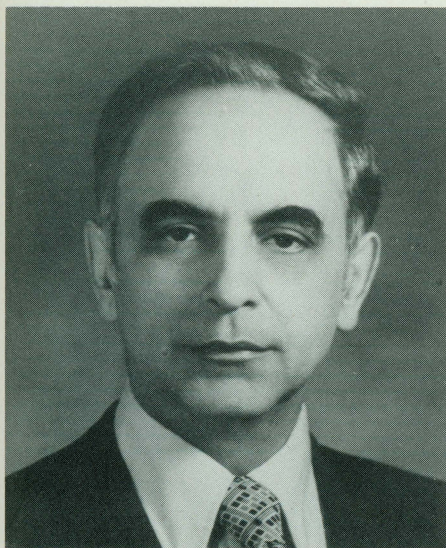
Temin has received many honors for his virology and molecular biology work, including the Nobel Prize.

David G. Dibbell, Professor of Surgery and Director of the Division of Plastic and Reconstructive Surgery, headed a plastic surgery team which traveled to Portoviejo, Ecuador. Senior residents in Surgery **John Noon** and **Paul Feldman** and Nursing

Supervisor Carol Slama were also part of the Interplast team. Interplast, Inc. sends teams of volunteer surgeons, anesthesiologists, pediatricians and nurses to developing nations throughout the world to perform reconstructive surgery.

Dean **Arnold L. Brown** was recently presented the Boy Scouts' Distinguished Eagle Scout Award, given by the national Boy Scout headquarters to an individual who has distinguished himself professionally and who has earned his Eagle Scout Award a minimum of 25 years ago. Brown has long been active in the Scouts in many capacities, including President of the Four Lakes Boy Scout Council from 1984-86. Currently, he is Chairman of the Donor Awareness program.

The new Electrophysiology Laboratory, headed by Assistant Professor of Medicine (Cardiology) **E. Wayne Grogan**, has been designed solely to detect and treat arrhythmias, a leading cause of fatal cardiac arrest. Lab personnel are able to induce and halt arrhythmias in order to analyze the cause and develop a treatment: electrode catheters are placed in several locations in the heart to record its rhythm; a series of programmed mild shocks are then delivered to different



Manucher Javid

locations in the heart to start and stop arrhythmias to determine the origin. At the same time, various anti-arrhythmia drugs can be tested for effectiveness.

Grogan also is concerned with implanting a new experimental pacemaker called the Sensor Kelvin 500, which regulates a patient's heartbeat with physical activity levels by responding to temperature changes in the blood resulting from rest or activity. The University is one of 10 medical centers to study the pacemaker under a grant from the U.S. Food and Drug Administration.

The Wisconsin Clinical Cancer Center has begun to examine the long-term impact of tamoxifen in women with only a small risk of having a recurrence of their breast cancer; the drug's effect on cardiovascular disease and osteoporosis are of particular interest. The investigators also hope to determine if tamoxifen might someday be used for women at risk of getting breast cancer but who do not yet have the disease. **Richard Love**, Associate Professor of Family Medicine and Practice and Preventive Oncology, heads the study.

Emeritus Professor of Neurophysiology **Jerzy Rose** recently received the



David Kindig

prestigious Award of Merit of the Association for Research in Otolaryngology (1987). Rose's wife, Professor of Neurology Hanna Sobkowitz, accepted the award on his behalf.

Manucher J. Javid, Professor of Surgery and head of the Neurosurgery Section, was profiled in the recently published book, "Modern Neurosurgical Giants." He was particularly lauded for introducing the use of urea during intercranial surgery to reduce increased intracranial pressure and the bleeding that can occur during such operations. Javid has used intravenous urea in more than 3,200 patients.

Harold J. Cook, Assistant Professor of History of Medicine and History of Science, is conducting research on early modern medicine in England and the Netherlands until August. He presented a paper to a conference on 17th Century medicine at Corpus Christi College in Cambridge in September.

Associate Dean of the Medical School and Professor of Pediatrics **Charles Lobeck** and **Tom Yuill**, Associate Dean of the School of Veterinary Medicine and Professor of Pathobiological Sciences, visited the Universidad de Antioquia in Medellin, Colombia, to ex-



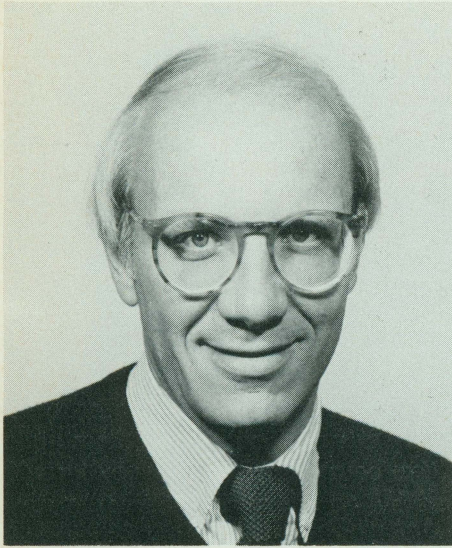
Paul Carbone

plore expanding cooperative efforts in training and research.

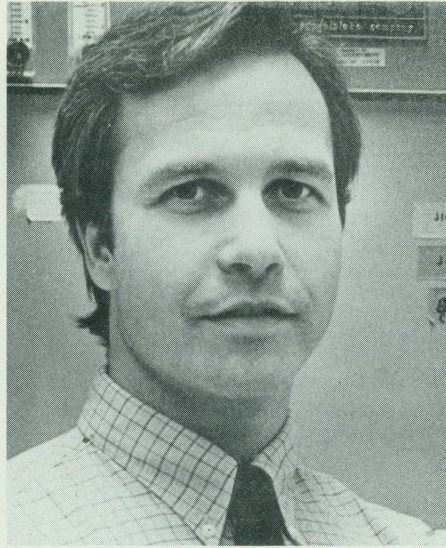
Professor of Medical Microbiology **Donald W. Smith** presented lectures and participated in research conferences in Sapporo and Tokyo, Japan; and in Beijing, Hangzhou and Shanghai in the People's Republic of China. He also presented a paper at the International Union Against Tuberculosis meeting in Singapore and presented lectures and visited collaborating research institutes in Bangalore, Madras, and New Delhi, India, in Cairo, Egypt, and in Copenhagen, Denmark.

Professor of Preventive Medicine **David Kindig** visited Panama last August as part of his continuing consultation with project Hope and Ministry of Health. He also was in England in September for a meeting of Kellogg Foundation international fellowship recipients.

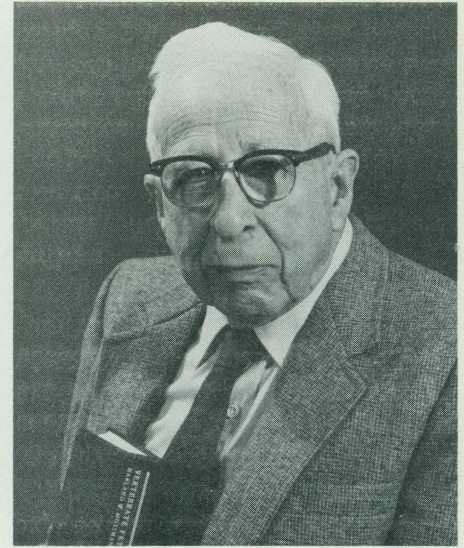
Martin Tanner, Assistant Professor of Human Oncology and Statistics, has received a \$74,645 grant from the National Cancer Institute to support his statistical research. The judicious use of statistics in planning experiments and in assessing results can be critical.



John Harting



Paul Sondel



Harland Mossman

Paul P. Carbone, Professor of Clinical Oncology and Director of the UW Clinical Cancer Center, has been appointed to the Clinical Pharmacology Subcommittee of the American College of Physicians (ACP), where he will study the use of generic drugs and therapeutic substitution and problems associated with marketing drugs internationally.

Assistant Professor of Anatomy **Theresa Duello** has received a \$100,000 grant from the U.S. Department of Agriculture to support her studies of the regulation of pituitary receptors for gonatropin releasing hormone, a brain peptide involved in reproduction.

William Miller, Assistant Professor of Medicine (Cardiology), recently received a \$100,000 grant from the National Scientific Council of the American Heart Association for research on how the heart functions on a beat-to-beat basis.

Associate Professor of Anatomy and Neurology **Lewis Haberly** has been awarded a \$450,693 four-year grant from the National Institutes of Health to study the physiological basis of memory and epilepsy in the cerebral cortex.

The American Cancer Society has awarded \$140,662 to **Paul M. Sondel**, Associate Professor of Clinical Oncology and Pediatrics, to support his research on the ways immune cells can be used to destroy leukemic cells.

Chairman of the Department of Anatomy **John K. Harting** has been awarded a \$711,665 five-year grant from the National Institutes of Health to continue his studies on the organization of central visual pathways.

Professor of Anesthesiology **John L. Atlee** recently received a \$5,000 prize from the Trustees of the Anesthesia Foundation for his book "Perioperative Cardiac Dysrhythmias: Mechanisms, Recognition, Management." The Trustees' committee was unanimous in its selection of Atlee's book as the best new monograph in anesthesiology in the 1984 through 1986 period.

John F. Morrissey, Professor of Medicine and head of the Gastroenterology Section, has been appointed to the sub-specialty board in gastroenterology of the American Board of Internal Medicine, and reappointed Chairman of the self-assessment examination committee of the American Society for Gastrointestinal Endoscopy.

Edward Ehrlich, Professor of Medicine (Endocrinology), was recently elected President of the Wisconsin affiliate of the American Diabetes Association.

In January of 1987, the Rutgers University Press published "Vertebrate Fetal Membranes" by Emeritus Professor of Anatomy **Harland Mossman**.

The book is Professor Mossman's magnum opus—an updated and expanded version of his 1937 monograph on the placenta and fetal membranes in the Carnegie Institution's "Contributions to Embryology." Dr. Mossman's monograph has been the fundamental publication in the area.

Valencia (Val) Prock, Emeritus Dean of the School of Nursing and Professor of Rehabilitation Medicine, has begun a two-year tour of duty as a public health practitioner with the Peace Corps in The Gambia, a small country in western Africa, where she travels from village to village and stays with local families.

David DeMets, Professor of Human Oncology and Statistics, has been elected a Fellow of the American Statistical Association. He also was elected to the Association's Board of Directors as the biostatistics representative.

Q

Alumni Capsules

1934

Antoinette Slosson Meuer has asked that the following verse be published because she has lost the name and address of her colleague who requested a copy. She has returned to her home in Utica after a satisfying but exhausting tour of service as a medical missionary in Iowa.

Spring Morning

Slid
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1937

At the regional meeting of the American College of Physicians, to be held in Appleton, Wisconsin in September 1987, Emeritus Professor of Medicine **Helen Dickie** will be honored by receipt of the Chapter Laureate Award. Helen is a Master of the American College of Physicians.

1943

Eugene E. Ekstam, a March of 1943 graduate, is retiring after 36 years of surgical practice at the Monroe Clinic and St. Clare Hospital in Monroe, Wisconsin. Gene and his wife, Evelyn, plan to remain in Monroe. Gene is a recipient of the WMAA Max Fox Pre-

ceptor Award for his distinguished service as head preceptor at the Monroe Preceptorship.

1946

A doctor shortage at the Eagle Butte Indian facility in South Dakota attracted retired general practitioner **Allen Limberg** of Glenwood City, Wisconsin. Accompanied by his wife, Ruth, Al spent a month last fall working at the hospital in Eagle Butte. The couple had use of an apartment provided by the hospital and were able to enjoy weekend trips to surrounding attractions including Mount Rushmore. Even though retired, Al also helps out at the Dunn County Health Care Center in northwestern Wisconsin. For a breather last spring, Allen and Ruth spent three weeks in Japan, China, Hong Kong and Hawaii, with the highlight of the trip being a renewal of friendships dating back to Al's tour of Army duty in the late 40's.

1947

Paul W. Moen of Moline has recently retired. He pioneered gastric bypass surgery in the Quad-cities, having performed 850 surgeries on patients with morbid obesity. More than 400 former patients, relatives and members of the medical community honored him at a retirement reception. Moen's plans include a return to flying, writing articles on obesity, stamp collecting, and music.

1951

Lyle and Ruth Olson recently received some UW-Madison campus publicity for their eleven years of dedicated participation on the UW-Madison Choral Union. The Olsons make a 120 mile round trip from Darlington every Monday night for rehearsals. The Choral Union joined the UW-Madison Sym-

phony in a presentation of the coronation scene from Moussorgsky's Opera "Boris Gudunov" on February 28. While a medical student, Lyle was a mainstay of the Medichoir.

1952

John Arkins, Milwaukee, retired from medical practice in November of 1986 and is currently evaluating various sites in the Southwest for a retirement home. He is also a Brigadier General in the U.S. Army—Retired.

1953

At the national meeting of the International College of Surgeons on April 1 in Washington D.C., **Sheldon Lipshutz** is being honored as the outstanding Regent of the year in the United States. He has served as Regent for Southern California for the past two years, and prior to that served as President of the College for Southern California. He is currently a National Vice President and served as Chief of Staff of Granada Hills Hospital and as a member of their Board of Directors. Sheldon practices General Surgery in the San Fernando Valley in the suburb of Encino. He lives with his wife Rita and their three children in Woodland Hills.

1956

Orrin N. Arneson of Amery, Wisconsin, was recently elected President of the Indianhead Chapter of the Wisconsin Academy of Family Physicians. It is the largest geographic chapter of the Wisconsin Academy, extending from Superior to Chetek.

Robert Edland of La Crosse has been installed as President of the American Society for Therapeutic Radiology and Oncology. Bob is Chairman of the Department of Radiation Oncology

Robert Edland of La Crosse has been installed as President of the American Society for Therapeutic Radiology and Oncology. Bob is Chairman of the Department of Radiation Oncology and Director of the Western Wisconsin Radiotherapy Center at Gunderson Clinic, Ltd. He was formerly a member of the UW Medical School faculty.

1957

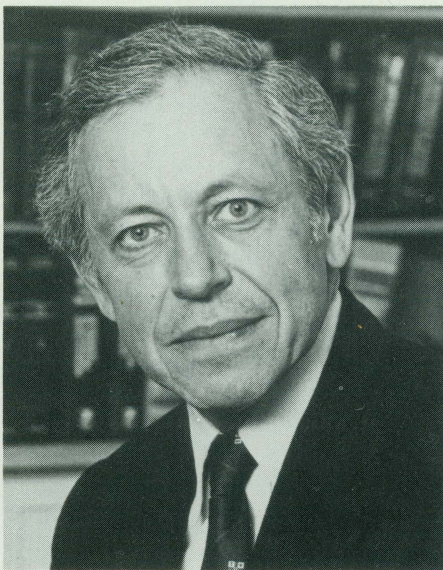
Both **Arthur Leon and Mrs. Leon (Gloria)** are members of the faculty of the University of Minnesota. Art is Professor and Director of Applied Physiology, Nutrition Section, School of Public Health, Division of Epidemiology. Mrs. Leon is Professor and Director of the Clinical Psychology Section of the Department of Psychology.

James C. Payne is hoping that Wyoming weather will permit him to attend the 1957 thirtieth reunion. The Payne family resides on a ranch at 8,600 feet in the Absaroka Mountains. Last February, ten continuous days of snow resulted in an eight-foot snow cover and twenty-foot high drifts. The snow isolated the ranch for two and one-half weeks, followed by an additional two weeks of isolation when the snow melted and washed out the road which connects the Paynes with the nearest community.

Hugh Riordan recently completed a two-year term as President of the American Holistic Medical Association. Hugh continues to serve as Director and President of the Olive W. Garvey Center For The Improvement of Human Functioning, Inc., in Wichita, Kansas. Among his many professional memberships is that in the Flying Physicians Association, in which he served as a member of their National Committee for the Psychological Evaluation of Pilots. Hugh has also been active in radio and television as consultant, writer, host, executive producer and advisor. Spouse Jan teaches in the Department of Nursing at the Wichita State University.

Leon Rosenberg was recently elected to the National Academy of Sciences. Dean of Yale University School of

Medicine since 1984, Leon received our Medical Alumni Citation in 1982 for his singular achievements in human genetics, particularly for his research in inherited metabolic disorders and clinical genetics. He was instrumental in establishing the Yale Department of Human Genetics and served as Chairman of the Department. Leon recently was also elected to a three-year term on the Board of Directors of the New Haven, Connecticut Science Park Development Corporation.



Leon Rosenberg

E. Richard Stiehm participated in his third marathon last summer, completing the Santa Monica Marathon course. Dick is Professor of Pediatrics and Head of the Division of Pediatric Immunology at UCLA. He is active in immunology research and in immunology, rheumatology and allergy practice. W.B. Saunders Co. will soon publish Edition III of his Immunological Disorders in Infants and Children.

Mrs. Stiehm (Judith Hicks Stiehm) is Professor of Political Science and Vice Provost of the University of Southern California.

1959

Frederick Melms has left his practice at the Red Cedar Clinic in Menomonie to join the staff of the UW Health Service. He received a 1986 Distinguished Service Award from the Wisconsin

Athletic Directors Association for his 23 years of volunteer service to the Menomonie High School athletic program.

1960

Richard Bunge presented a lecture on the UW-Madison campus in February as part of a campus wide neuroscience lecture series. "Recent Observations on the Regulation of Schwann Cell Functions" was the title of the lecture. Richard is Professor of Anatomy and Neurobiology at Washington University School of Medicine, St. Louis.

Leonard Stein was honored by the Center for Public Representation, a Madison, Wisconsin based consumer advocacy organization, by being named a winner of its annual "Public Interest" award.

Len was named Outstanding Health Advocate. A University of Wisconsin Professor of Psychiatry and Director of the Mental Health Center of Dane County, he was cited for "pioneering work in the development of comprehensive community care for the seriously mentally ill" and for designing the mental health system of Dane County which many rank best in the nation.

1962

William Austad, a member at the Monroe, Wisconsin Clinic, has been elected a fellow of the American Rheumatism Association. William's postgraduate training was taken at Hurley Hospital, Flint, Michigan and at Rackham Arthritis Research Unit in Ann Arbor.

For the second consecutive year, **James Basiliere** has been reelected Medical Staff President at Mercy Medical Center, Oshkosh, Wisconsin.

1966

David Neal of San Diego played a role in the return of the America's Cup to this country. David was medical director of the *Stars and Stripes*, winner of the Cup in the recent races in Freemantle, Australia.

Richard Silberman has been reelected Chief of Cardiology at St. Luke's Hospital, Milwaukee.

1967

Fred Lamont of Green Bay, Wisconsin was recently elected to the Board of Trustees of St. Norbert College. Fred is also President of the medical staff of St. Vincent Hospital, Green Bay and a member of the Board of Governors of the Wisconsin Heart Association. In addition, he has served a three-year term on the Medical Alumni Association Board of Directors.

1980

Paul Apyan will be completing a fellowship in total joint arthroplasty in London, Ontario in July, 1987. On his return to Hixson, Tennessee Paul will welcome visits from University of Wisconsin students visiting prospective residences in Chattanooga.

Patrick McBride, UW Medical School assistant professor of family medicine and practice, and also in the department of medicine's section of cardiology at UW Hospital and Clinics, received a five-year, \$431,930 grant from the National Heart, Lung and Blood Institute, a division of the National Institutes of Health. The preventive cardiology academic award, which is given to a medical school only once, will be used to develop the curriculum for teaching the prevention of cardiovascular disease.

1981

Phoenix, Arizona is where **Jeffrey Edelstein** has begun the practice of Cosmetic and Reconstructive Eye Plastic Surgery. Jeffrey completed a residency in ophthalmology at Henry Ford Hospital in Detroit, and a fellowship in cosmetic and reconstructive eye plastic surgery at the University of Arizona.

David M. Huibregtse recently joined the medical staff of the Janesville Riverview Clinic in the Department of Orthopedic Surgery. He completed his

residency at the University of Missouri in Columbia.

Enid Okokon is now a member of the River Falls Medical Clinic in River Falls, Wisconsin. Enid completed her pediatric residency at Lutheran General Hospital, Park Ridge, Illinois and practiced at the DuPage County Health Center and Humana Hospital in Hoffmann Estates, Illinois before returning to Wisconsin.

1982

Craig M. Wilson and family have moved to West Roxbury, Mass., where Craig is a fellow in infectious disease at Boston Children's Hospital. While Craig was completing his residency and serving as Chief Resident in Pediatrics at Stanford University Hospital, the Wilsons' first child was born—Clifford Frazer Wilson.

1983

David Deubler has joined the Kiel Clinic, Kiel, Wisconsin, and has been certified as a Diplomate in Family Practice. David completed his Family Practice Residency at the UW residency program in Wausau. He is on the medical staffs of St. Nicholas and Sheboygan Memorial Hospitals.

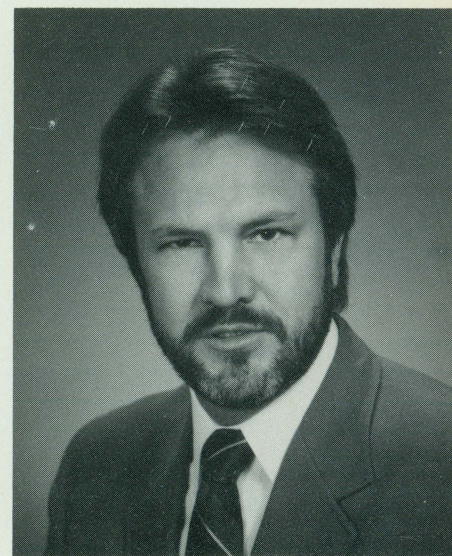
Susan Isensee completed her Family Practice Residency at the UW-Madison program and has joined the Dean Clinic satellite in Waunakee near Madison.

1985

Ronald V. Myers, Sr. recently spent an elective month at Mount Sinai Hospital, Milwaukee in Emergency Medicine. Ron is currently a resident in Family Medicine at Louisiana State University, Bogalusa, Louisiana. While in Milwaukee, Ron performed on piano and trumpet at a benefit concert to raise funds to fight drug and alcohol abuse. He also presented a lecture on the medical aspects of alcohol and drug abuse and moderated a panel discussion on Drug and Alcohol Abuse in the Black Community.

Former House Staff

Neil Alan Fenske has been promoted to Professor of Medicine and Pathology at the University of South Florida College of Medicine. He also directs the Division of Dermatology in the Department of Internal Medicine, and is Chief of the Dermatology Section at the James A. Haley Veterans Hospital in Tampa. A graduate of the St. Louis University School of Medicine, Fenske served his residency at UW in Dermatology 1974-77 and was Chief Resident 1976-77.

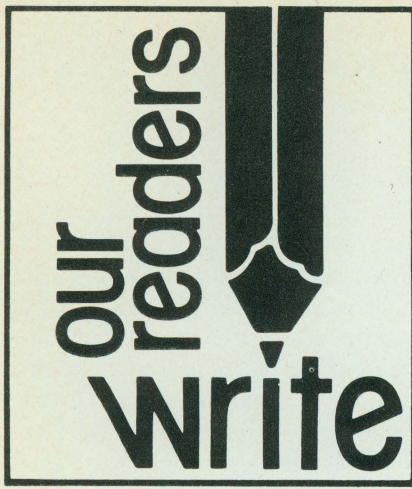


Neil A. Fenske

J. Brent Kooistra, (Pediatrics-Allergy) received the 1986 Distinguished Service Award of the American Lung Association of Wisconsin. He is the founder and director of Camp WIKIDAS (a camp in Wisconsin for kids with asthma) and helps to present lung association workshops in southern Wisconsin for parents of children with asthma.

Mark Souza, (Res.—Psych.) has been named Associate Clinical Director of the Psychiatric Program at Boscobel Memorial Hospital.

Daniel A. Tobin (Resident—Radiology) has retired from active practice and has been designated Emeritus Professor of Radiation Oncology by the University of Louisville School of Medicine. Q



Dear Victor Falk,

I have meant to write these comments to you since early December, 1986, but the long Christmas list, and other problems, have put off the remarks about your wonderful first article on "The Faculty, 1932."

Now a new issue of the Q'Mag. has just arrived, but I still want to say thanks and congratulations about the 1932 column. You were very lucky to contact Ralph Hawley for the material, since he has been a great and modest helper of the Med. School and the *Quarterly* writers (and me, for years). The almost 70 names you have mentioned is a great list, and I knew them all, and *my* name wasn't there, since 1932 was a time among my 5 U. Wis. Med. chores from 1922 to 1943, and the *Quarterly* writings through a dozen years later. I was a student, and got my B.S. degree and first two years of Medicine in 1924; I was held over (with Gort Ritchie) to instruct in pathology with the great Dr. Bunting and his fine associate Dr. Edgar Medlar, for a year before being sent by Dr. J.S. "Uncle Joe" Evans to University of Pennsylvania.

I was brought back (from Trudeau at Saranac) for a Residency in Medicine by Dr. Middleton, my "chief" for years, in 1930, and then sent on to research at Harvard (and back to Trudeau for 2-1/2 years of rest and research). Then finally back to help found the "Chest Disease Service" on the roof of W.G.H. by Dr. Middleton and Dr. Buerki, and others. It lasted from 1935 to 1943, and changed from nine beds to forty-five beds in size, and

was fine for teaching as well as diagnosis and care.

These memories of the faculty people through the years seem worth telling you. A major chore of J.S. "Uncle Joe" Evans was to get the second year students well-placed in other schools for their final two—and degree—especially at University of Pennsylvania. He conferred with Dean Pepper, and bargained. Also, if the title "University of Pennsylvania" turns up as a *faculty* source, it is due to the same contact, and quite often. He was a great and pleasant diplomat... Dr. Mid. was not only a great teacher in all ways, but who never forgot the errors of all students, and collected them with acts and recitals. He deserved everything that has been named after him... Dr. "Chuck" Barden seemed most serious, but who, in one oral exam, asked a question of me and, when answered, said, "I never do it, but I must give you 100!"... Dr. W.S. Miller was most famous for his Medical History Society, for which I wrote three papers, thru the years, one about the faculty, with letters from several and 90 pictures of all the members and it's now in the Middleton Library... Joe Gale worked closely with us on the Chest Disease Service, using many new surgical methods, and we wrote and published three papers. ... Thru the years I wrote two with Dr. Mid; two with Dr. Sims; one each with Drs. Blankenship, Lew Cole, Bingham, Jumbo Stiehm, Bill Mowry, Bob Buerki, Jack Pyre, Otto Foerster, Ovid Meyer, Chester Kurtz, and Edgar Gordon. The writings, which were the most pleasure, were for the W.S. Miller Seminar, the years of the Beer and Bicycle Club, and (later) the many years for the *Quarterly*, at two and then four times per year. Karver Puestow was a fine instructor (in the "Little Red" building) when I was a soph. and he still writes fine letters about mutual friends and U. Wis. meetings!

The pleasant trio of Bill Bleckwenn, Hans Reese, and Mabel Masten was a good one in psychiatry, as was the jolly John Harris, Ralph Campbell, and the quiet Madeline Thornton in Ob/Gyn. ... Drs. Tatum and "Mo" Seevers made a strong pair in pharmacology, just as the very scholarly Drs. Meek

and J.A.E. Eyster in physiology, strong lecturers and teachers... Others on the list were the great Ralph Waters, who let his staff practice inhalation methods on him; Erwin Schmidt was the tall, serious, constant surgeon; Van Valzah a fine bedside teacher who helped his friends in many ways; Marie Carns (and Net Washburne) were a fine pair in Medicine; Kent Tenney was a gentleman and teacher who helped a great many; Bill Stovall worked hard for the school in many ways, for many years; Ira Sisk and "Bruce" Wear carried Urology thru the many years; and Paul Clark, who taught the students and his colleagues in bacteriology for years and lived to a great old age.

So, these are comments on only part of the 1932 list. They were all good friends and good teachers. I have been very grateful, and again we are glad that you published the list.

*Best regards and good luck,
Bill Oatway*

Dear Dr. Bender:

Thank you for the information about the Medical Alumni Host Program. During my residency interview tour, I availed myself of this wonderful service. I stayed with Dr. and Mrs. Robert Lederer in Denver, Colorado; Drs. Julie Black and Tim Harder in Iowa City, Iowa; and Drs. Joy Greenway and Steven Vig in Tucson, Arizona. All were very gracious and accommodating in taking in a stranger and welcoming him warmly. It was a tribute to the Alumni Association's commitment to medical students. I thank you.

*Sincerely,
Christopher E. Harris*

Dear Friends:

Enclosed is my donation for 1986. I'd like it to go toward something for students and it is given in honor of Helen Dickie. I'm still playing doctor but I seem to get less and less done in more and more time each year.

I no longer get hives thinking about retirement.

*Cheers,
Nancy E. Furstenberg, M.D., 1950
31151 Rio Drive
Warren, Michigan 48093*

Dear Misha Lustok:

When I enrolled in the Medical School, Dr. H. Bast had us study a microscopic section of bone in Science Hall. Along one edge of the section osteoclasts were removing bone and on the opposite side the osteoblasts were laying down bone. Today, some 60 years later, I am wondering how that struggle between the osteoblasts and the osteoclasts ended? Did the osteoclasts or the osteoblasts win the contest? What would that microscopic section look like today?

*Frank Maresh, M.D.
Class of 1932*

*1028 E. Juneau Avenue, Apt. 418
Milwaukee, WI 53202*

Dear Editor:

I thought you might find it of interest that Sacramento Valley has acquired the first mobile lithotripter west of the Mississippi River. Our unit will be traveling between Reno, Sacramento, and San Francisco Bay area. I have been named director of this unit and we anticipate treating approximately 1,000 to 1,200 stone cases per year. The unit will be available for its first patients on December 29.

*Very truly yours,
Erby J. Satter, M.D.
Class of 1952*

Dear Friends:

The winter 1987 issue of the *WMA Quarterly* arrived today and was eagerly devoured. Such a broad spectrum of news indicates good reporting, good writing, and good editing... all of which are greatly appreciated. I salute you, one and all.

I am especially grateful for Dorothy W. Betlach's excellent article, "The Wisconsin Preceptorship Program After Sixty Years, Part II." Somehow I missed Part I and I would be most grateful for a copy of same. Check is enclosed to cover cost of copying and mailing.

My preceptorship was with Merritt Jones in Wausau in the fall of 1934. I was delighted to find his picture on p. 10.

Many thanks and a hearty hello to Ralph.

*Sincerely,
David Goe Welton, '35*

Dear Dr. Betlach:

Thank you for the kind words which you expressed regarding the Max J. Fox Preceptorship Award. Your phrases, "flamboyant, eccentric, sensitive" and "incomparable," brought a smile to my face. I can also personally say he was a unique father.

Your article regarding the Precep-

torship expresses truly how my father felt about communication to medical students. As he used to say to me, "enough of the bullshit of the classroom, let's see if you can apply anything."

I, fortunately, had my own opportunity to evaluate the Preceptorship program as an alumnus 1968 and, without question, my three months spent at the Marshfield Clinic with Dr. Lawton, Dr. Magnin and associates were probably some of the most formative on my medical school years.

On behalf of all of the Fox family, once again, I appreciate your kind words and please give my best to all.

*Sincerely,
James M. Fox, M.D.*

Dear Doctor Betlach:

The letter from Deborah, daughter of Dr. Jean Chapman Born was very delightful to me, as I was in Bhutan in 1982. I can only agree with her as to how wonderful it was. I have written to her mother, but also would like to write to Deborah. Would you be kind enough to send me her address?

My husband was Dr. Ralph Campbell, Obstetrics and Gynecology, until he retired in the '60's. We had always hoped to go to some place like Bhutan

Coming Events

May 14, 1987

Post-Fiftieth Reunion Dinner
Madison Club

Class Reunions—See listing

May 15, 1987

Alumni Day

May 16, 1987

Editorial Board Meeting
8:30 a.m.—Madison Club

**Council of Representatives
Breakfast Meeting**
9:30 a.m.—Madison Club

**Medical Student Recognition
Ceremony**

Champagne Reception for Graduates
and Parents

Commencement Ceremony
Saturday Evening

October 9 and 10, 1987

Orthopedic Alumni Dinner

Visiting Professor Mark D. Brown, M.D., Ph.D.
Professor and Chairman
Department of Orthopedics and
Rehabilitation, University of Miami

where we could work together. His death at the time he retired from practice ended all my hopes. I did go to India myself several times to work as a volunteer in Kasganj, U.P., where I taught and worked in the hospital with the head of the hospital there, as a medical secretary. While I lack a lot of formal training in hospitals (I was trained as a kindergarten teacher) I found a lot of things I could do to help make life easier for the doctors there.

Sincerely,
Maribel M. Campbell
 7118 Raymond Road
 Madison, WI 53719

Dear Dr. Schwartz:

I am very pleased to see that you are recommending to the University of Wisconsin administration that the escort tradition be continued. Both my husband and myself graduated from the University of Wisconsin and took that opportunity to honor my parents who are both physicians. It must certainly be an equal sense of honor to ask other members of the faculty or physicians whom one respects to join them on this wonderful day of celebration. I strongly support continuation of the escort tradition.

I am very moved by the article enclosed in the recent Board of Direc-

tor's mailing. As a corresponding member to the Board of Directors, I have not ever had the opportunity to meet Dr. Lawton. However, this is a wonderful perspective on death and dying and on a wonderful man's life. I hope that these comments will be included in an alumni bulletin. Thank you for including it.

Best regards,
Carol M. Rumack, M.D.
 Acting Chief,
 Division of Diagnostic Radiology
 Associate Professor,
 Radiology and Pediatrics
 University of Colorado

Q

Continuing Medical Education

DATE: **April 24-25, 1987**
 TITLE: **Depression in the Elderly: Diagnostic and Treatment Issues**
 SITE: **The Sheraton Inn, Madison, Wisconsin**
 CREDIT: **AMA Category I hours (8), elective AAFP hours (8) and UW Continuing Education hours (8)**

DATE: **April 29-May 1, 1987**
 TITLE: **9th Cardiac Rehabilitation Symposium-- Primary and Secondary Prevention of Heart Disease: Making the Right Decisions**
 SITE: **Red Carpet Hotel, Milwaukee, Wisconsin**
 CREDIT: **15 hours of AMA Category I credit and University of Wisconsin Continuing Education hours**

DATE: **April 30-May 1, 1987**
 TITLE: **Controversies in Family Medicine: Prevention Screening and Health Maintenance in Primary Care--Where Are We in 1987?**
 SITE: **The Wisconsin Center, Madison, Wisconsin**
 CREDIT: **AMA Category I; AOA Category 2-D; AAFP Prescribed; and University of Wisconsin CEH's--all 14 hours**

DATE: **May 14-16, 1987**
 TITLE: **Tenth Annual Sports Medicine Symposium**
 SITE: **The Sheraton Inn and Conference Center, Madison, Wisconsin**
 CREDIT: **AMA Category I, AOA Category 2-D, and University of Wisconsin CEH's--all 20 hours. AAFP and National Athletic Trainers Association credit pending. American College of Sports Medicine endorsement pending.**

DATE: **June 10-12, 1987**
 TITLE: **Cardiovascular Pharmacology Symposium: Pharmacologic and Clinical Interrelationships Between the Heart and the Brain**
 SITE: **The Red Carpet Hotel, Milwaukee, Wisconsin**
 CREDIT: **American Medical Association Category I:**

This continuing medical education activity meets the criteria for the following hours of Category I of the Physician's Recognition Award of the American medical Association: attendance at entire conference, 17 hours; attendance on June 10 only, 6 hours; attendance on June 11-12 only, 11 hours.
 Continuing Education Units: This symposium is accredited by the University of Wisconsin, Continuing Medical Education, for the following CEUs: attendance at entire conference, 1.7 CEUs (17 hours); attendance on June 10 only, .6 CEUs (6 hours); attendance on June 11-12 only, 1.1 CEUs (11 hours).
 American Academy of Family Physicians: Credit pending.
 American Osteopathic Association: AOA accredits this program for Category 2-D credit.

DATE: **June 25-26, 1987**
 TITLE: **The Second Conference on Clinical Home Care in the 1980's: Economics, Implementation, and Ethical Issues**
 SITE: **The Wisconsin Center, Madison, Wisconsin**
 CREDIT: **AMA Category I--13 hours; AOA Category 2-D--12½ hours; University of Wisconsin CEH's--13 hours; AAFP Credit pending**

DATE: **September 10-12, 1987**
 TITLE: **Child Advocacy as a New Role for Professionals**
 SITE: **Concourse Hotel, Madison, Wisconsin**
 CREDIT: **AMA Category I, 15 hours, University of Wisconsin CEU's 1.5**

FOR FURTHER INFORMATION CONTACT:

Sarah Z. Aslakson
Continuing Medical Education
465B WARF Bldg., 610 Walnut Street
Madison, WI 53705
Telephone: (608) 263-2856

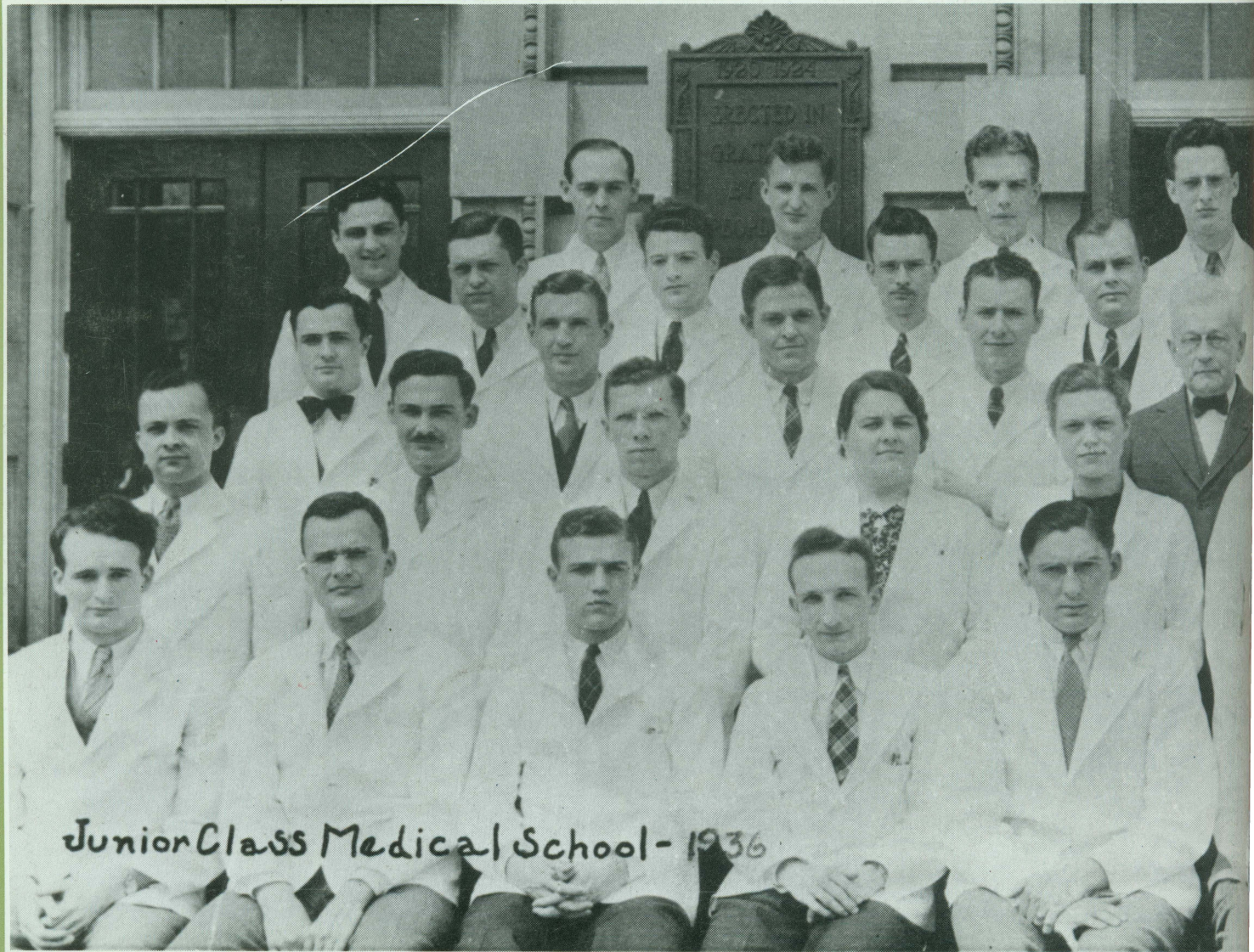
1986 Class Reunions

CLASS	REUNION COMMITTEE	ACTIVITY
Post-fiftieth and pre-1927 Medical Alumni Citation and Emeritus Faculty Award recipients, Emeritus Faculty, Past Presidents, Representa- tives and Board members	Staff	May 14 Cocktails and Dinner Madison Club
1937	Helen Dickie Joseph Lalich	May 16 Reunion Lunch-12:00 Noon Dr. Dickie's Home 501 Clifden Drive Madison, Wisconsin
1942	Earle Rotter George Behnke Stan Custer Bill Luetke	May 14 Reunion Dinner Inn on the Park Hospitality Suite Available before the reunion
1947	Sigurd Sivertson	May 14 Reunion Dinner—Madison Club
1952	William Crowley Richard Botham Dean Connors Weir Horswill Ed Liebl Baldwin Lloyd	May 16 Plans under development
1957	Wilbert Wiviott	May 15 Reception—Inn on the Park Prior to Annual Awards Banquet
1962	Charles Miller Kathryn Nichol	May 16 Reunion Dinner—L'Escargot
1967	Bernard Kampschroer Mary Ellen Peters John Brennan	May 14—Reunion Dinner May 16—Brunch Madison Club
1972	Bernard Mansheim	May 14 Reunion Dinner—Inntowner Motel
1977	Diana Kruse	May 16 Reunion with Families—1:00 p.m. Home of Drs. Diana Kruse and Walter Baranowski 4134 Twin Valley Rd. Middleton, Wisconsin
1982	Donald Kohn	May 16 Reunion Dinner—Madison Club

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