

HEALTH SCIENCE

SPECTRUM



Fresco buono adds new dimension
to contemporary architecture

A Message from the President

Throughout the early history of physician education — in fact, until comparatively recent times — the basic sciences represented the established “hub” of medical schools. Teaching the clinical sciences, that is to say the preceptorship training in medicine itself, was handled by volunteer private practitioners. Subsequently, during the last quarter-century, clinical teaching has been taken over by full-time faculties in all areas of expertise — greatly strengthening the structural basis of medical education.

Today, the basic sciences are resurging as the vital partner of the clinical disciplines, not only in medical teaching but in an increasingly intensive research effort being directed against disease. At this institution, great emphasis has been placed on the integration of basic and clinical sciences, with new achievements in research being recorded as a result of this interaction.

A case in point is the creation of UTHSCD's new Department of Biophysics and Molecular Genetics, chaired by Dr. Joseph Goldstein, and the establishment of the

companion Center for Genetic Diseases, directed by Dr. Michael Brown. These two distinguished scientists, who also hold professorships in Internal Medicine, now are concentrating their highly regarded investigations on the basic cellular riddles of inherited disorders resulting in blood vessel and heart disease. (An article in this issue of *Health Science Spectrum* focuses on the latest aspects of their work, along with studies by other scientist-clinicians at the center.)

A national accreditation team has lately cited the high level of integration of the basic and clinical sciences as a major strength of our institution, which the team's spokesman complimented as a “true academic health center.” Thus I think we can take pride both in the quality of work being performed in the basic and clinical sectors, and in the extent to which we have erased departmental barriers to creative scientific inquiry.

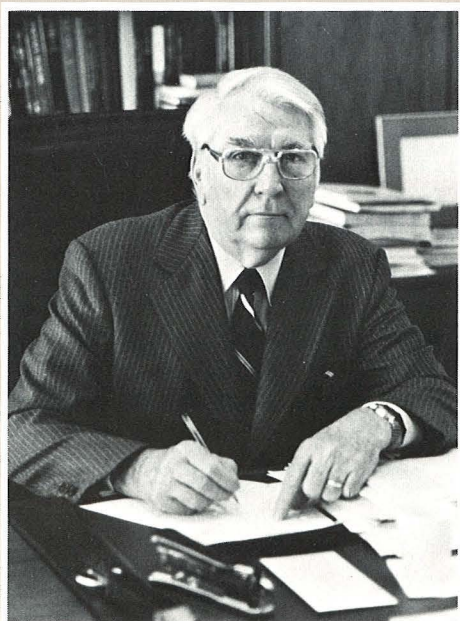
In numerous instances, a basic scientist and a clinical investigator have teamed up to wage a collaborative assault on a particular medical problem. Indeed, several members of the medical faculty possess dual specialties, reflected in their joint appointments to both a clinical and a basic science department — in effect, integrating complementary areas of expertise within a single individual. One such scientist, Dr. Denis McGarry, has been recently named recipient of the 1978 Lilly Award, for his discoveries of the biochemical mechanisms of ketoacidosis — a life-threatening side effect of diabetes. Dr. McGarry is professor of biochemistry, a basic science, and internal medicine, our largest clinical field. His achievements exemplify the benefits of the sort of fertile scientific marriage of expertise to which I refer.

To encourage interaction between practitioners from within

these two spheres of medical research and education, our physical plant at the health science center has been designed so that buildings housing basic and clinical departments interconnect, facilitating the interworking between those disciplines. Also, this priority of integrating scientific inquiry is reflected in our newly reinforced teaching program designed to train medical scientists. This joint effort of the medical and graduate schools confers both M.D. and Ph.D. degrees to individuals seeking to pursue careers in academic medicine and research.

Major research facilities at our institution such as the Cecil H. and Ida Green Center for Reproductive Biology Sciences are prime examples of this principle of scientific interaction at work. The recently expanded Green center, directed by Dr. Paul MacDonald, is engaging in studies of great potential impact for the improved health and well-being of the newborn. A primary reason for creating such centers is to bring together, both programmatically and physically, expert basic scientists and clinicians to tackle elemental health questions in concerted fashion. Also in this mold are the McDermott Center for Study of Human Growth and Development; the Moss Heart Center; the Cancer Center; the General Clinical Research Center, and the cross-disciplinary teaching and research programs in Immunology.

The importance of these programs, and the need to attract and retain the best-possible scientists to staff them, cannot be overemphasized. We have underscored these priorities because of our conviction in the soundness of this approach to the major medical problems plaguing mankind. Though costly, with results often seeming esoteric and remote and thus not



Darryl Baird

easily dramatized, basic research coupled with knowledgeable clinical expertise furnishes the best hope for ultimately reducing not only human suffering but also the spiraling costs of medical care. Dr. Lewis Thomas, president of Memorial Sloan-Kettering Cancer Center, who is often called the most listened-to man in medicine, was on our campus recently as the first Philip Jonsson Visiting Professor in the basic sciences, and had this to say:

"I believe that the major research effort, and far and away the greatest investment for the future, must be in the broad area of basic biological science . . . Whenever medicine has really succeeded brilliantly in its technology, as in immunization or with antibiotics, the cost has been very low because such measures are directed straight at the underlying disease mechanism. The deeper our understanding of the disease mechanism, the greater are our chances of devising direct and decisive measures to prevent disease or turn it around before it is too late . . . In short, I believe that the major diseases of human beings have become approachable biological puzzles, and they are ultimately solvable."

Our institution's overall integrated approach to scientific inquiry and medical teaching embodies this idea — that the ultimate economy in medical management and health care lies in the future solution of today's prevailing maladies such as cancer, diabetes, heart disease and arthritis at that most basic level. The real results we can look forward to in the future should come from the dedicated work of the medical scientist and the clinician, toiling together toward this common goal.

Charles C. Sprague
CHARLES C. SPRAGUE, M.D. President

HEALTH SCIENCE

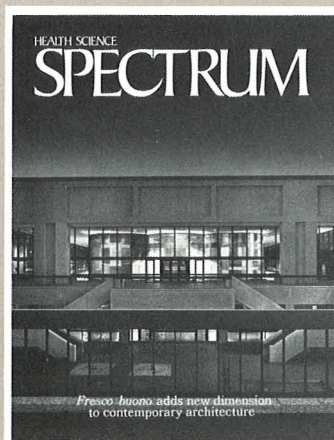
SPECTRUM

The University of Texas Health Science Center at Dallas

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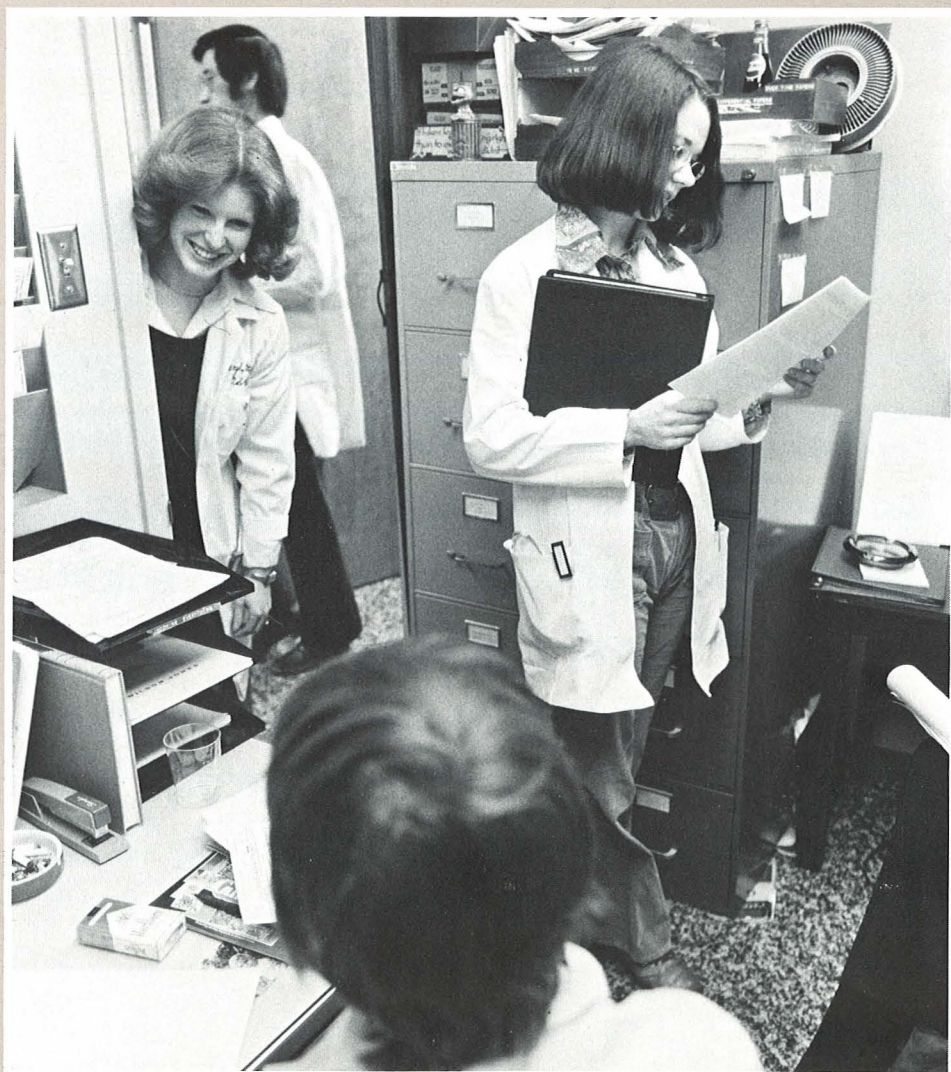


ON THE COVER: Photographer Darryl Baird captures the blending of the Novros fresco with the surrounding architecture at The University of Texas Health Science Center at Dallas. The profusion of space, line and color in the Gooch Auditorium foyer creates a total design and infinite variations in detail: Lines move around corners. Colors move into patterns. And a unifying frieze emerges. Cover story, page 16.

mini-hospital tackles maxi-problems

General Clinical Research Center provides special environment for the study of human disease

By ANN HARRELL

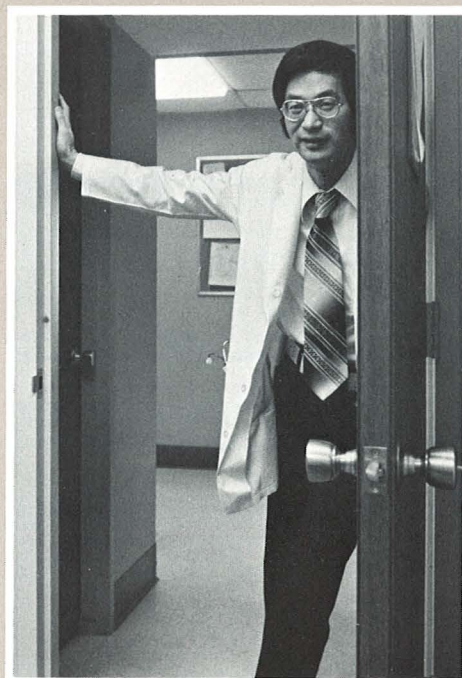


The office of GCRC administrator Judith Townsend is the hub of clinic activity. Checking on patients are Cheryl Northcutt, R.N., left, and Dr. Jennifer Cuthbert, right.

"I resent being sick."

Frances Henderson has the look of a fashion model. When she speaks there's a glint in her violet eyes and an intensity in her manner that conveys a level frankness. "I never heard of having liver problems unless someone over-indulged in alcoholic beverages or got it from a dirty needle — neither thing I'm guilty of." This is now the eighth year Ms. Henderson has been the victim of liver disease of unknown origin which has left her a semi-invalid.

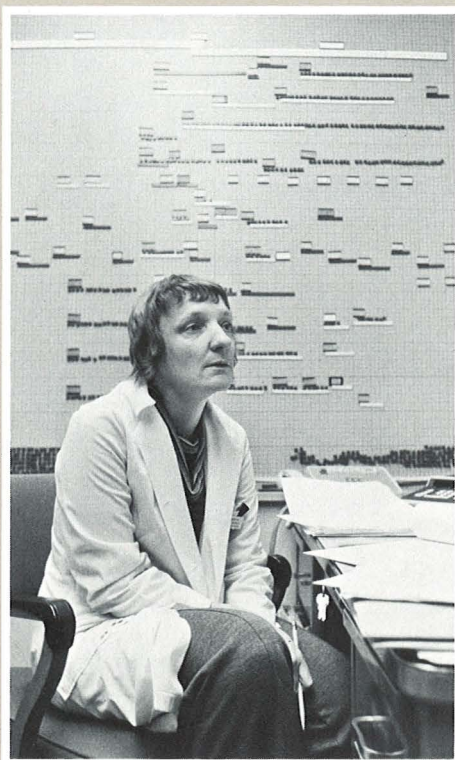
Her fight against a debilitating and misunderstood problem led her to the General Clinical Research Center at The University of Texas Health Science Center at Dallas. As an outpatient in a research hospital, she is willing to share a story which might give insight to others.



Director Dr. Charles Y. C. Pak opened this center after working at the original NIH-based center at Bethesda.

Her story began when the former executive secretary was hospitalized with a duodenal ulcer attack. At the time, Ms. Henderson had taken a leave of absence from her secretarial duties to help her boss, the head of a research firm, in the remodeling and decorating of a warehouse which was to house new offices for the company.

"I literally wore blue jeans and ate lunch on the floor for 45 days," she recalls. "I noticed I was getting extremely



Judith Townsend, R.N., keeps the organization running smoothly with the help of her whole-wall flow chart.

tired, but that wasn't unusual, considering how hard I was working," she says.

"But it did bother me that I sometimes caught myself dozing at red lights. Then there was some nausea and vomiting, as well as pain in my upper abdomen. But I thought I was just working too hard, overtired. I'd go to the doctor when the project was completed."

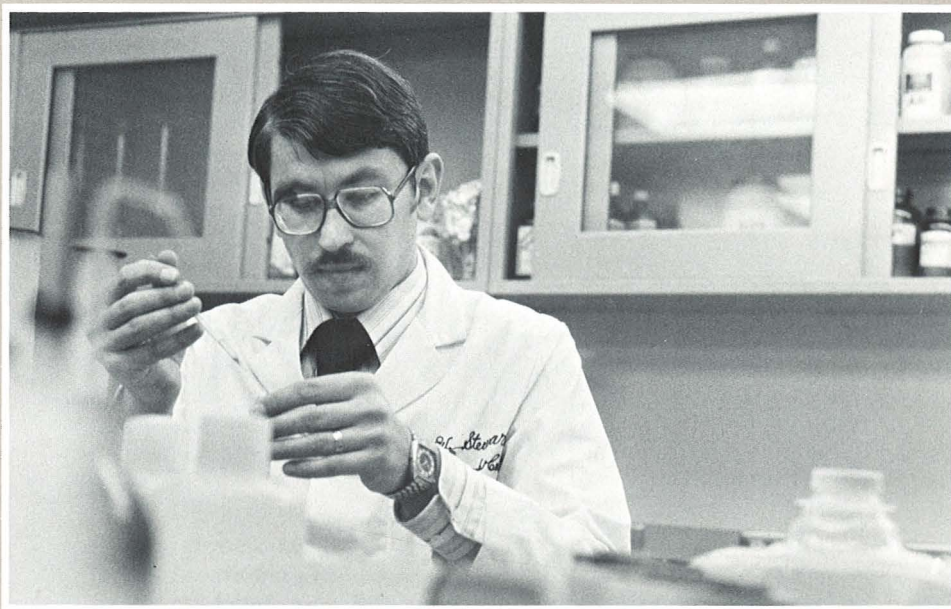
Then one night when she was working late, Frances Henderson doubled up and collapsed at her desk. Her boss rushed her to Baylor University Medical Center where she was treated for an ulcer, put on a highly restricted diet and referred to a liver specialist. She was told she could not work again.

"It became increasingly clear I could not function in the work world. The simplest normal act, like changing my linen, picking up my house, becomes a difficult task. It's the most awful tired in the whole world — it's a living hell," she says.

Unable to continue working, for the next three years, she lived on savings. Then she had to seek Social Security disability payments.

Ms. Henderson had had two liver biopsies when she received a letter from Dr. Burton Combes, professor of internal

Photography by Darryl Baird



Special laboratory procedures require a special lab in the GCRC. Alan Stewart, research associate in internal medicine, spends all his time performing these tests.

medicine at the health science center. A prominent researcher in liver disease, and board chairman of the newly-chartered American Liver Foundation, Dr. Combes had seen Ms. Henderson once at the request of her physician. He asked her to participate in a study of bone deterioration in liver diseases and possibly be a subject in another study later.

Sick of "watching my life run through my hands like grains of sand," she says, "My first reaction was 'Oh my God, I don't think I can do this!'" The liver biopsy was painful enough. What would a bone biopsy, requiring surgery, be like?

After consulting her minister, she talked with Dr. Combes. That visit convinced her to participate in the study.

"You see the worst thing about this illness is having something no one knows the cause of, and no one has a cure for."

She decided if there were people working on these problems who wanted her help, she would be willing to do what she could. So she packed her bag for a six-day stay in the General Clinical Research Center.

The GCRC is a "mini-hospital" with 11 in-patient and two out-patient beds on the seventh floor of Parkland Memorial Hospital, connecting with the health science center. Such centers for the study of disease originated some 20

years ago, when the National Institutes of Health developed the Clinical Research Program. Small units in key centers of the country were specifically designed for clinical investigation.

Toward this goal, work at the centers is directed at learning more about the cause, progression, prevention, control and cure of human diseases, as well as translating technological and therapeutic advances in biological knowledge into effective patient care.

Dr. Charles Y. C. Pak, UT professor of internal medicine, is director of the Dallas GCRC. The physicians there are faculty members at the health science center. The GCRC was specifically designed for human research, with not only patient beds, but also seminar areas, food preparation areas, specimen-collecting facilities and a small central laboratory included within the area. Funded by NIH in 1974, the center will operate this year with a budget of three-quarters of a million dollars.

"Our unit is multi-disciplinary," said Dr. Donald Seldin, chairman of the Department of Internal Medicine, which supervises the GCRC. Physicians from various disciplines of medicine house patients in the clinical research center.

"It makes for a very exciting environment. New kinds of questions are raised, there is an interaction of many different

"Complex studies require highly trained specialists at every level."



A bone density scan is one way of determining whether bone deterioration has set in.

disciplines. The net effect is that we can be a major participant in the development of new knowledge concerning disease."

And human research is necessary to the development of this knowledge.

"One of the major problems in medicine is a lag between the development of high scientific achievement and the application for the treatment of patients and the diagnosis of illnesses," Dr. Seldin said. And according to a recent report on the GCRC program, human beings must be studied to enable biomedical scientists to better grasp the complexities of disease processes.

The report states: "Animal and tissue models come close to duplicating some of man's disease processes, but since they cannot duplicate his physiology, they fall short of completely replacing human subjects. Then again, some human

maladies cannot be modeled; they occur only in man."

Dr. Pak, a noted kidney stone researcher, agrees. The Korean-born scientist feels not only that the national GCRC program deserves credit for most of the enormous strides made in patient care in the last 20 years, but also that these studies could not have been carried out without these centers.

Some medical advances derived nationally from GCRC research are widely known. These include the pacemaker for heart blockage and the artificial kidney. There are also new organ transplantation methods, as well as new methods for the detection of cancer which have come from the 82 units.

There are several reasons, according to Dr. Pak, that a special environment is necessary for this kind of research.

"First of all, there is no facility for re-

search in a normal hospital setting," he said. General hospital wards cannot cope with the complex care and treatment demanded of research involving humans. The explicit studies, called protocols, include measuring every ounce of liquid and solid taken in by the patient. All urine and fecal matter must be analyzed. Certain patients' activities must be limited according to their particular study, and the temperature of the environment must be maintained at a stable level for some.

There is also the matter of cost.

"There is no way general hospital wards can assume the added costs of such intensive care," Dr. Pak pointed out. Neither should the patient, who is there for diagnosis and/or treatment, be expected to bear the financial burden for research. Also, the special procedures require highly trained specialists at every level.

Dr. Pak is proud of his highly trained staff. Judith Townsend, R.N., is center administrator. Joe Zerwekh, Ph.D., a research biochemist, directs GCRC's own laboratory. Linda Brinkley is administrative dietitian, and Carol Poindexter, R.N., has charge of out-patient service. Cheryl Northcutt, R.N., serves as administrative coordinator for kidney stone patients seen in the GCRC. And Alan Stewart is a research associate in the GCRC lab.

Frances Henderson has nothing but praise for this staff, along with Dr. Jennifer Cuthbert, UTHSCD research associate and director of the study, and assistant professor Dr. Kenneth Glass, the surgeon who calmed her fears about bone biopsy.

After being critically ill for eight years, Ms. Henderson was "beginning to feel like a number."

"But those wonderful people never once treated me like that. Not once did Dr. Pak, Dr. Cuthbert or Dr. Combes or any of the nurses just say, 'It's something your doctor ordered,' to me when I asked a question. Everyone always explained everything carefully. I always had the feeling they were interested in me," she said.

Bone deterioration, such as Ms. Henderson may have, is just one problem being examined in the GCRC. According to Ms. Townsend, bone and stone disorders accounted for one-fourth of last year's in-patients of whom approximately



An important area of research is growth and development. Electrodes are applied to 19-year-old Bob Dodd's head for sleep studies.

450 stayed an average of eight days. Diabetics made up another one-fourth. Another 20 percent had growth and development problems, while patients with hypertension accounted for 15 percent.

Pulmonary patients accounted for 30 percent of the 1,500 who made 4,697 visits last year. Eighteen percent of the patients seen as out-patients had diabetes, and 12 percent were hypertensive.

The center's patient population ranges from the richest to the poorest segments of society. In fact, when the center first opened, most patients were referred from Parkland, but now many private physicians — some from great distances — are taking advantage of advanced medical knowledge and procedures at the center.

All patients voluntarily enter the GCRC upon recommendation from their physicians to researchers who are doing studies on particular problems.

Studies must be approved by the

Human Research Committee at the medical school, its executive committee, and the center's own human research committee, which follows NIH guidelines. The research project is carefully explained to each patient in lay language, including the possible risks involved.

Why would a person already ill want to be subjected to research procedures which are often painful and require, at best, six hours every few months for an on-going study and, at worst, living in an isolated environment in the GCRC for as long as 80 days?

Frances Henderson explained: "I am extremely grateful for having all those brilliant minds directed at my problem." Since her tests are not yet complete, she does not know whether her liver condition has caused bone deterioration. If it has, she will participate in further study; if not, she will chalk up her participation in the study as a contribution to research.

Either way, she figures she will come out ahead. For if it is found she does have bone deterioration, she will receive vitamin D injections, and if injections prove superior to the currently accepted treatment of oral dosages of the vitamins, she will be a jump ahead in the daily battle to stabilize her condition.

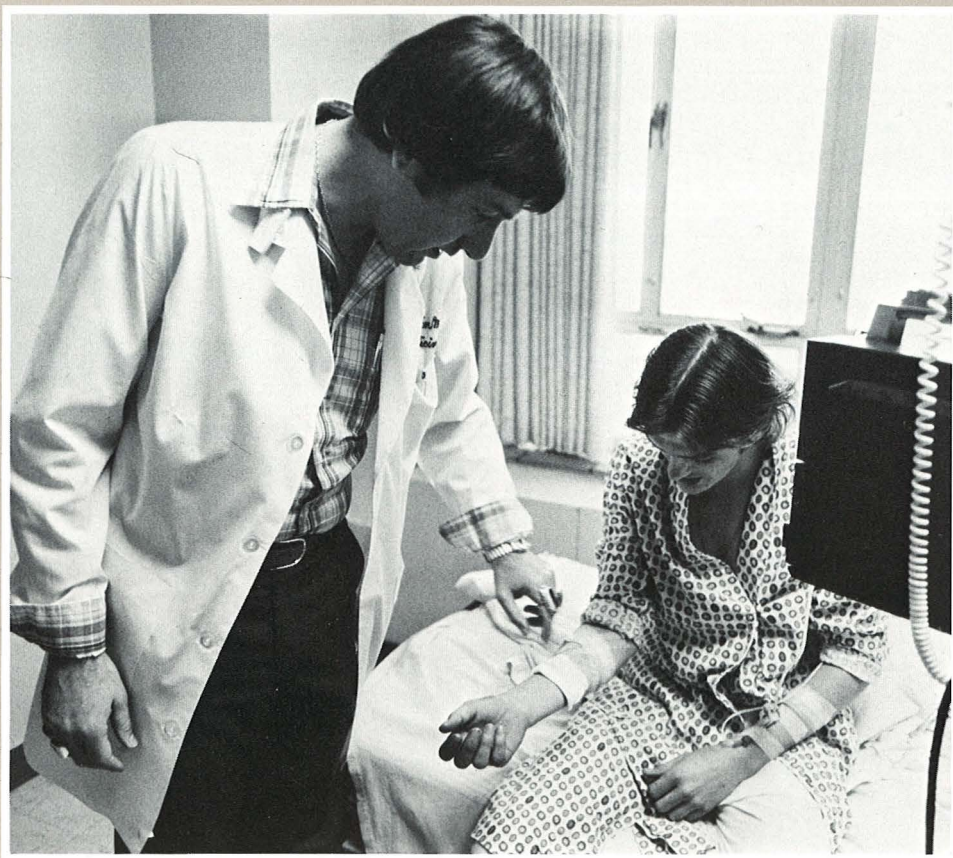
Another GCRC patient, Anita Robinson, also looks on her participation in the study as a "form of insurance." A housewife, mother and part-time office worker, Mrs. Robinson is not incapacitated by her kidney stone condition. But she has had surgery for one large stone and currently has one stone lodged in each kidney.

She says that the bone density tests and labs she has had as an out-patient would have cost her more than \$5,000. "All I have to give them is a little bit of my time," she adds. Her contribution may also pay off if researchers work out a treatment to help her in any future problems.

And that is a definite possibility.

This year Dr. Pak received a half-million dollar grant from the NIH to set up a kidney stone research center. This painful disease results in many lost work days and more than \$50 million annually in hospital costs, according to NIH reports.

"The pain suffered by those with kidney stones," Dr. Pak said, "can be worse than the pain of childbirth." He is



Dr. Phillip Raskin, diabetes researcher, is looking at the effects of a new drug on his patients.

“Maybe by my being a control, they’ll know what to do for me.”

working on methods of treating different causes of calcium stones with specific drugs in order to eliminate the “shotgun therapy” which uses a single drug for kidney stones, regardless of the cause.

Dr. Zerwekh, a biochemist, is looking into the role of vitamin D in stone formation. In addition, Dr. John Fordtran, professor of internal medicine and chief of gastroenterology, is conducting stone research.

Researchers are also delving into the myriad problems of diabetes at the GCRC. Dr. Philip Raskin, assistant professor of internal medicine, praises the cooperative attitude of patients like David Boyd, the “king of volunteers,” and Ray Buckasew, who is receiving the experimental drug somatostatin, which researchers believe may more readily

control diabetes than current approaches.

More than just “insurance,” many patients have definitely been helped through the inseparable research and treatment they have received in the GCRC. Raymond Tapp is a good example.

Tapp was sent to the GCRC with a painful back problem diagnosed as bone deterioration, a condition that has much in common with kidney stones. An avid skier before the deterioration set in, Tapp went from using crutches to a cane after treatment at the center, and today walks normally. Dr. Pak attributes much of Tapp’s recovery to the experimental use of hydrochlorthiazide, a diuretic, along with the more traditional treatment of vitamin D combined with sodium fluoride.

Retired Dallas businessman Earl Hayes is another GCRC patient who has

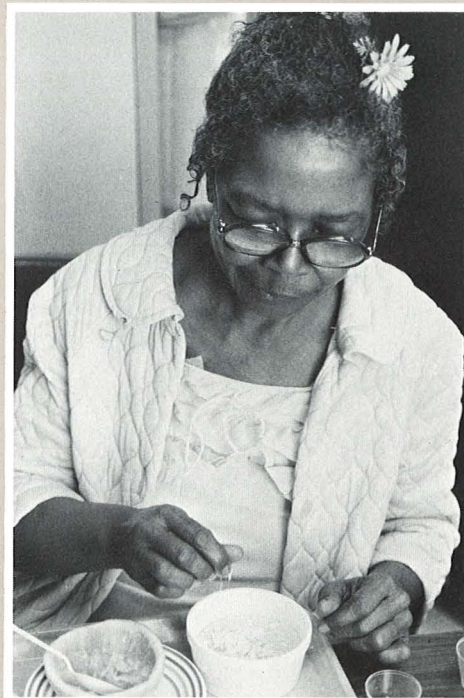
had spectacular results from his treatment at the center. Hayes, afflicted with multiple health problems, suffered bone deterioration, a condition associated with the large doses of steroids he has taken in the past for another physical problem.

Under the care of three center physicians, Drs. Pak, Al Roberts and James Wilson III, Hayes has made remarkable progress. Doctors hope that his condition may have been reversed, and Hayes himself looks forward to becoming more mobile with a new electric wheelchair.

Research at the center encompasses all ages. Children and young adults are also patients, with conditions ranging from diabetes to lipid problems, connective tissue problems, chronic diar-



Regulating the explicit protocols includes measuring every ounce of liquid and solid taken in by the patient.



Eugene King breaks one of her daily 54 capsules into her breakfast cereal.



Roy Peterson, R.N., shows Lubbock businessman Raymond Tapp how to pack specimens for mailing back to the center. Tapp, according to the nurse, "practically opened up the place."

rhea and hormonal deficiencies.

Problems of growth and development are not limited to the very young, however. Sometimes hormonal deficiencies don't become evident until adolescence. Take the case of Bob Dodd — at 19 years of age only five feet, two and one-half inches tall. Bob, a senior at Richardson's Lake Highlands High School, has been in the GCRC for three visits. After tests of his calcium metabolism and a study of hormone patterns during sleep, a series of hormone doses was prescribed. His most recent sleep study was to determine whether these hormones are working.

Not everybody in the center is ill, however. Some are "controls" — physically normal people needed in the studies for comparison to ill patients. And they volunteer for a variety of reasons — such as the medical students who pick up a little extra money while gaining new insights into the profession they're preparing for.

Mary Lou Guthrie, a Parkland employee, has volunteered for several studies in hypertension. She explained

her reason for spending her vacation in the GCRC as a control: "One of these days my blood pressure may shoot up. Maybe by my being a control, they'll know what to do for me."

James Franklin's presence is his way of saying "thanks" to medical science. Serving as a volunteer control in a liver disease study, Franklin said he was there because of what had already been done for him.

"You see," he explained, "I've had a kidney transplant. I had to get my kidney from someone who helped me out. Now I'm willing to help keep someone else alive." ■



Most of the controls have motivations almost as complex as the patients themselves.

Graduate school hosts 'most listened-to man in medicine'

**Dr. Lewis Thomas speaks
on altruism in biology and on basic
research and the future of medicine**



Dr. Lewis Thomas, president of the Memorial Sloan-Kettering Cancer Center in New York, has been called "the most listened-to man in medicine." Author of the popular book, *The Lives of a Cell*, which won him the National Book Award in Arts and Letters, Dr. Thomas is well-known not only as a physician and researcher, but also as a writer and philosopher.

In December he visited the health science center as the first Jonsson Visiting Professor in the basic sciences. The family of Philip R. Jonsson provided funds to support this annual visiting professorship in the Graduate School of Biomedical Sciences.

"Nobody in biomedical science today surpasses Dr. Thomas in the excellence of his research, in his ability to communicate to scientists and laymen alike the excitement and importance of basic research, and in his concern for relating scientific findings to the human condition," said Dr. Kern Wildenthal, dean of the graduate school, in introducing Dr. Thomas.

In addition to serving as president of Sloan-Kettering, Dr. Thomas is professor of pathology and medicine at Cornell University Medical College. He has held a number of prestigious academic appointments, including the deanship of both Yale University School of Medicine and New York University School of Medicine. He graduated from Princeton University in 1933 and received his M.D. from Harvard Medical School in 1937.

The following are excerpts from two of the lectures Dr. Thomas gave during his three-day visit to the Dallas health science center.

On Limiting Scientific Inquiry

Are there some kinds of information leading to some sorts of knowledge that human beings are really better off not having? Is there a limit to scientific inquiry that is not set by what is knowable but by what we ought to be knowing? Should we stop short of learning about some things for fear of what we or someone will do with the knowledge? My own answer is a flat "no." But I have to confess that this is an intuitive response, and I am neither inclined nor trained to reason my way through it.

You cannot edit science in advance

Darryl Baird

and you certainly cannot censor it. It is in the nature of the scientific enterprise that you cannot predict how it is going to turn out. You cannot make choices in this matter, selecting things you think you are going to like and shutting off the lines that seem unpopular. You either have science or you don't, and if you have it you are obliged to accept the surprising and disturbing bits of information and even the overwhelming and upheaving ones along with the neat and promptly useful bits.

On the Need for Basic Research

We are nowhere near ready for larger scale programs of applied science in medicine, for we do not yet know enough. I believe that the major research effort, and far and away the greatest investment for the future, must be in the broad area of basic biological science. Here and there, to be sure, there will be opportunities for productive applied science, but these opportunities are not going to come often and they cannot be forced into existence before their time.

Whenever medicine has really succeeded brilliantly in its technology, as in immunization, for example, or with antibiotics, the cost has been very low because such measures are directed straight at the underlying disease mechanism. The deeper our understanding of a disease mechanism, the greater are our chances of devising direct and decisive measures to prevent disease or to turn it around before it is too late.

On the Major Human Diseases

I have no doubt that there will turn out to be dozens of separate influences that can launch cancer, including all sorts of environmental carcinogens and very likely many sorts of virus, but I think there will turn out to be a single switch at the center of things and it is there for the finding. I think that schizophrenia will turn out to be a neurochemical disorder with some central, single chemical event gone wrong. I believe that there is a single causative agent responsible for rheumatoid arthritis, which has not yet been found. And I think that the central vascular abnormalities that are responsible for the launching of coronary occlusion and stroke have not yet been glimpsed, but they are there wait-

ing to be switched on or off.

In short, I believe that the major diseases of human beings have become approachable biological puzzles, and they are ultimately solvable.

On Altruism in Nature

It is almost safe to assert and almost on scientific grounds that altruism, or something like it, would have to exist as a general principle if a system that is as dense and at the same time as immense as this one, containing such a flabbergasting variety of co-existing forms of life, were to have any sort of permanent existence as the life of the earth, as it plainly does. If all the components were continually locked in combat, tooth and claw as they used to say, and struggling to edge each other off the planet and bent on survival by extermination, the place would be a shambles. And it is not.

I suggest another way of looking at evolution. Up until now, biology has been focusing attention on the factors involved in the evolution of species, or of the individuals contained within species and in recent years on the evolution of proteins and other macromolecules inside the individuals. Perhaps it is time now to be examining more closely the evolution of the whole system of living things, the entire spectacularly coherent structure of the earth itself. It is, after all, the only closed, intact ecosystem that we know anything about. Inside it there aren't any living things that stand alone and all of the parts have life because of the life in all of the other parts.

On the Human Role in Nature

It seems to me, based on no science at all but a lifetime of looking around in human company, that most people have an instinctive, biologically driven ineluctable desire to be useful. To succeed in the gratification of this drive is one of the surest ways to be happy. And to fail at it is an absolute misery.

Usefulness is a more profound and insatiable urge than eating or drinking or propagating one's genes. I find it hard to explain this except by assuming that it is in the nature of human beings to be useful. It is one of the identifying marks of our species. Like the shapes of the leaves of the trees or the songs of

birds, we seem to be made this way.

I would not go so far as to say we have particular genes for encoding usefulness, but maybe in the aggregate our sort of DNA allows for a sensory receptor, perhaps a small center somewhere in the right cerebral hemisphere, where the realization of being useful is received and recognized as pleasure. It could just be.

On Language

I've been trying to think of the niche for human beings. Do we have anything like a niche? Anything equivalent to a coral reef? You'd think not to watch us in action. We can live anywhere and we do, even a few of us under the sea or out in space. And we have long since swarmed over every part of the earth. There is no place at all left unmarked by humans. And now we are even sending memoranda into the next galaxy. All other creatures seem to be adapted for particular parts of the planet and for particular ways of living in those parts, but not us.

But there is one niche for us, rather like a coral reef, or more like the idea of a coral reef, and we made it ourselves for ourselves and we live in it. It is language. It is not known when the capacity for speech was built into our brain, but it must have been a relatively recent event, an eye blink in evolutionary time. Whenever, it was probably then that we began to become a biologically social species — ultimately as compulsively communal as the famous social ants and termites.

Anyway, language became the environment in which humans lived. And like a reef it built itself into an immense live creature with an urge to grow and change. And it has a life, so to speak, of its own. As it changes and extends itself, it demands new adaptations on the part of everyone living in it. It becomes a mountainous structure made up of huge stores of information and images from which whole societies and cultures take their form. ■

CHRIS LAND

Study of hereditary diseases may yield new information about how the body works

Decoding genetic garble

By BOB FENLEY



Sculpture from pre-Incan period in Peru. Some genetics experts see a strong resemblance to children afflicted with Lesch-Nyhan disease.

Cri du chat . . . Tay-Sachs disease . . . Hurler's syndrome . . . Joseph family disease . . . Lesch-Nyhan syndrome . . .

Just as we breathe sighs of relief at the demise of polio and smallpox, it looks as if modern medicine has pried open a Pandora's box of ghastly new ailments. The field of genetics — of hereditary, metabolic and environmental defects — posts new labels almost monthly. But a closer look reveals some familiar faces: A boy depicted in pre-Columbian pottery bears striking resemblance to the recently described "Lesch-Nyhan" syndrome involving bizarre self-destructive behavior. And it's probable that Aristotle knew that some persons have a genetic predisposition to hemolytic anemia that could be triggered by fava beans.

Whether they have plagued man since antiquity or recently arisen as mutation, a number of these disease states have yielded new information under study by distinguished researchers at The University of Texas Southwestern Medical School.

The collaborative efforts of Drs. Joseph Goldstein and Michael Brown in probing a genetic disease resulted in the discovery of a fundamental mechanism by which the body regulates production of cholesterol in cells.

Dr. Roger N. Rosenberg, chairman of the Department of Neurology, together with Dr. William Nyhan of the University of California, was the first

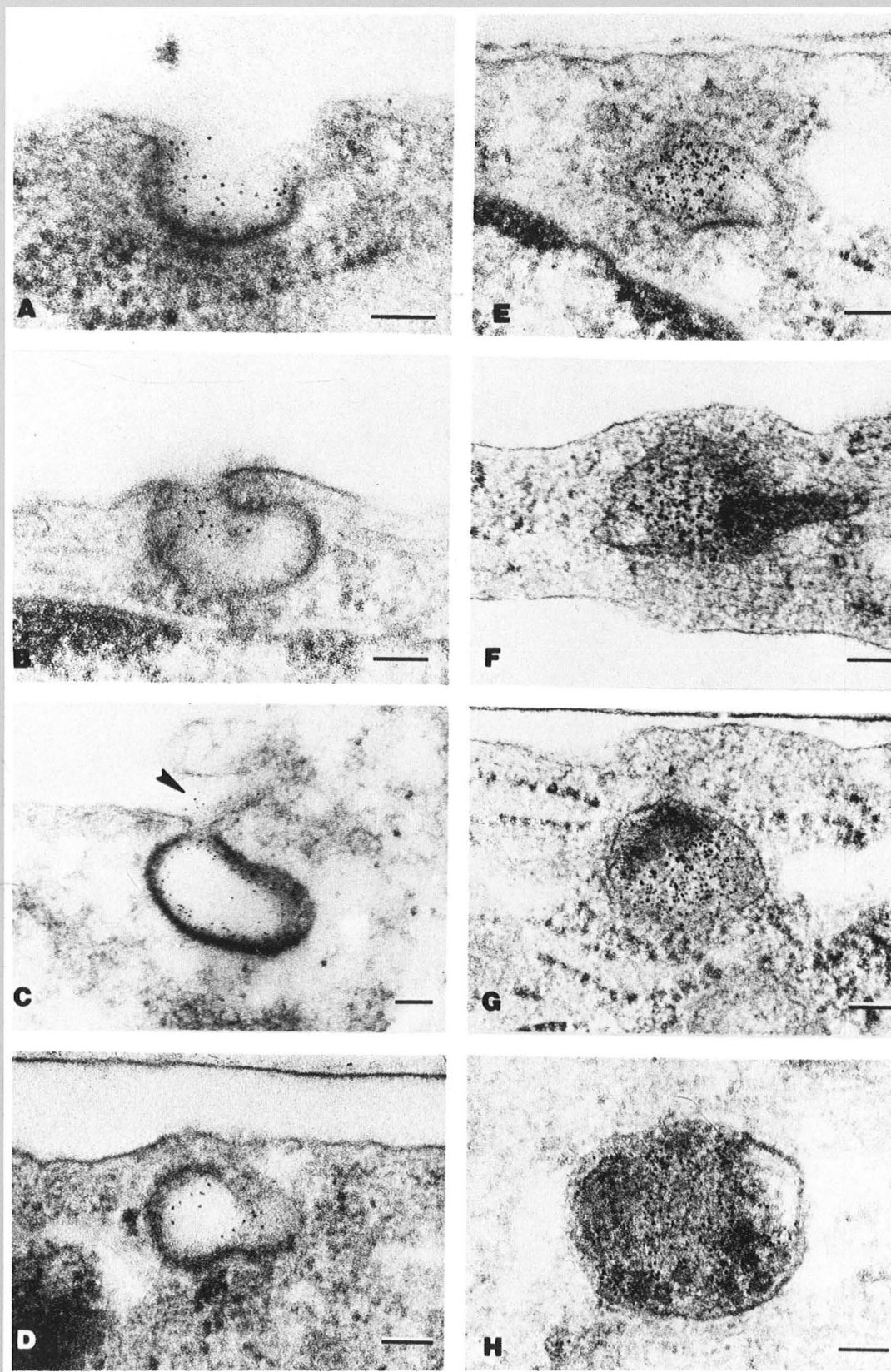
to identify a genetic affliction known as the "Joseph family disease."

There have been more than 2,000 genetic diseases identified, some of which show promise of helping scientists further unlock knowledge of basic ways in which the body works.

Drs. Goldstein and Brown began by studying a genetic disease called "familial hypercholesterolemia" which means a family-related state of overproduction of cholesterol — a type of body fat implicated in heart and blood vessel disease.

The researchers discovered that in some persons, a genetic defect left the body's cell surfaces with too few or none of the chemical receptors which concentrate in structures now called "coated pits." The two first learned that these "receptors" in normal persons specifically bind a type of blood fat known as low-density lipoprotein. This substance is then taken inside the cell via the "coated pit" where it suppresses a key chemical which promotes production of cholesterol, among other functions.

Some persons inherited from one parent a form of the disease in which their cells were left with only a few receptors able to collect the low-density lipoprotein. They had moderately high levels of blood cholesterol. But others, who received a faulty gene from both parents, were left with no receptors at all. This resulted in astronomically high levels of cholesterol and an early



Research by Drs. Joseph Goldstein and Michael Brown has shown how normal cells attract and utilize cholesterol. In these unusual microphotographs by Richard Anderson, low density lipoprotein (small black dots) collects in pits on the surface of the cell. (A,B.) The pits, coated with protein receptors which bind with the low density lipoprotein, form into sacs and move inside cell. (C,D.) Once inside, they engage in biochemical reactions which provide cholesterol for cells and suppress excess cholesterol manufacture by the cell.

death from heart attack or stroke.

Drs. Brown and Goldstein became the first scientists to diagnose the severe form of the disease in a fetus. The Belgian mother had already seen her only child die at eight years from a heart attack.

When she was 16 weeks pregnant with another child, her doctor sent the Dallas specialists a sample of her amniotic fluid. They quickly began culturing the cells and in three weeks had an answer. The next child, too, would have the severe form of hypercholesterolemia.

This meant the child would be severely restricted in activity, would have chest pains and probably would die of a stroke or a heart attack as the first child did. The mother elected an abortion which was done at 20 weeks. Post mortem revealed gross excess of cholesterol in the blood — 300 milligrams per 100 milliliters as compared to the normal 40.

The investigation of how the cell's coated pits function, pursued with Dr. Richard G. W. Anderson of the Department of Cell Biology, has opened up a fascinating new area of understanding in the past few months.

Not only do the pits serve as a collection and ingestion point for low-density lipoprotein, they seem to do the same thing with some hormones and with iron, say Drs. Brown and Goldstein. In all cases, the pits seem to be a quick transport mechanism for chemicals to get into the cell.

In February, The University of Texas System Board of Regents approved a Department of Biophysics and Molecular Genetics with Dr. Goldstein as chairman. The department will contain a Center for Genetic Diseases of which Dr. Brown will be director.

The department will be devoted mostly to basic genetic research. The job of clinical genetic counseling, previously handled by Dr. Goldstein, will be taken over shortly by a new faculty member.

A second strong focal point in genetics research has been established by Dr. Rosenberg in the Department of Neurology. One of his collaborators, Dr. Nyhan, chairman of pediatrics at the University of California in San Diego, gives this perspective:

"Shortly after 1950 the number of

known disorders involving amino acid metabolism was only seven. By the late 1960s, the figure rose to between 40 and 50. There has been an enormous increase in knowledge due to advances in methodology — including a purple staining technique and paper chromatography. Now the curve for 1966-67 has taken off again due to methodology."

Some of the new techniques assisted Dr. Nyhan, Dr. Rosenberg, Dr. Parkhurst Shore of Southwestern, and Carolyn Bay of California in identifying what is now known as the Joseph disease in more than 300 persons of ancestry stemming from Portugal and the Azores.

"In Joseph's disease, a single gene mutated to change the biochemical function of the brain in selected regions," says Dr. Rosenberg.

Around the age of 30 those afflicted with the disease begin suffering motor spasticity — the gait changes and stumbling and falling are common. A cane is gradually needed and then a wheel chair or a walker. Speech becomes slurred, thick and indistinct. Fine movement coordination becomes impaired. Finally, and it may last over a period of 20 years, the symptoms become more severe with pneumonia and then death.

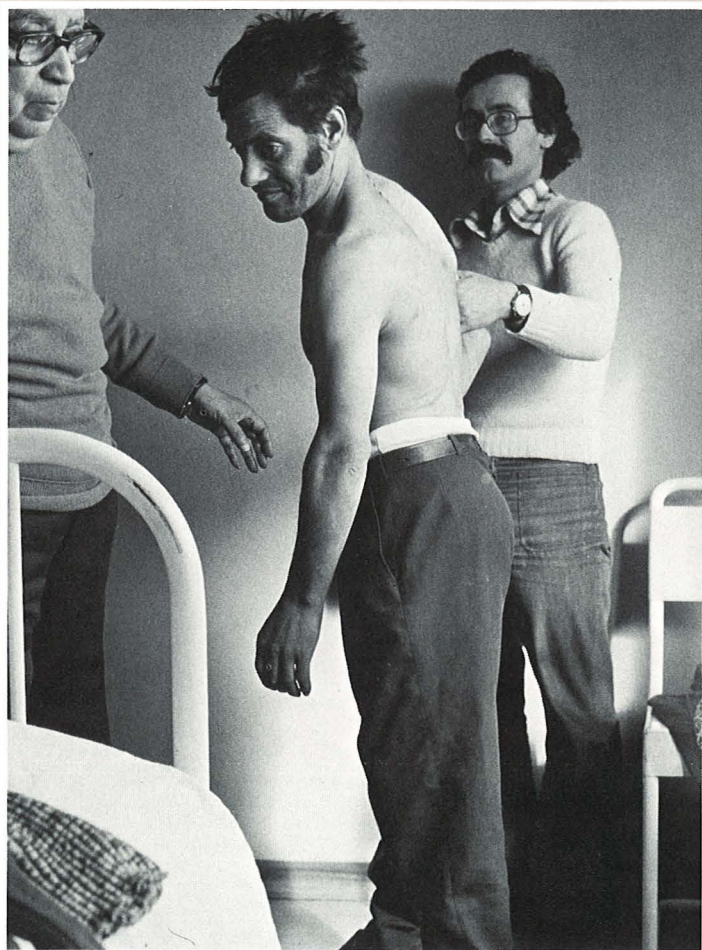
Drs. Rosenberg and Nyhan first identified the Joseph disease in 1975 after nearly 100 descendants of a Portuguese sailor named Antone Joseph held a family reunion in Oakland, California, to discuss the family affliction.

From there, the scientists checked a similarly afflicted Massachusetts family which descended from another immigrant, Jose Thomas. Then Rosenberg and Nyhan found out that both Joseph and Thomas came from the same island — Flores — which is about 400 miles west of the main island group.

In the summer of 1977, Rosenberg and Nyhan flew to the Azores and caught a boat to Flores, population 5,000. Directed to the village of Ponta Ruiva, the two visited the head of the local hospital who knew of the disease and, in fact, called it "Ponta Ruiva disease."

The two collected biopsies from some of the 18 persons they found afflicted on the island and brought them back for analysis.

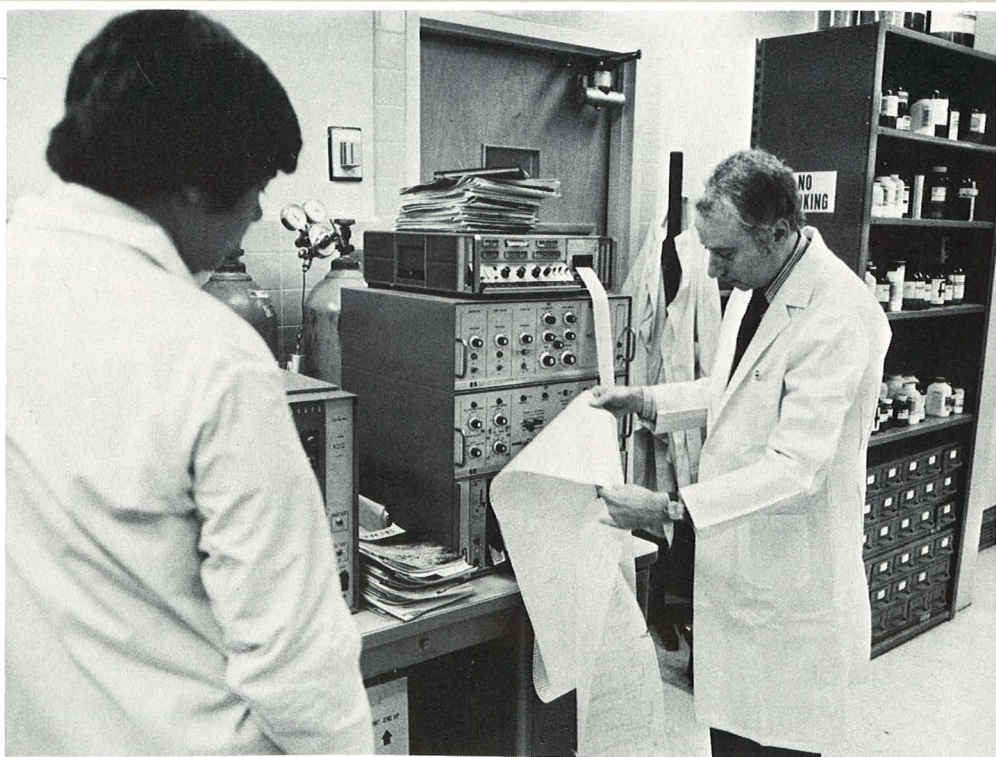
Today Dr. Rosenberg is conducting experiments which are aimed at finding



Victim in which Joseph's disease was considerably progressed. This man was from a small village near Ponta Ruiva.



Brother of man at left shows unsteadiness of gait aided by canes.



Dr. Brown, left, and Dr. Goldstein check the printout of a test for genetic malfunction.

a "genetic marker" for the disease.

"There is a selective involvement of motor centers," says Dr. Rosenberg. "Spasticity, lurching, stiff-legged gait, choking and, finally, death from an inability to handle pharyngeal secretions."

Joseph's disease exhibits one chemical abnormality — victims seem to have a rather low level of homovanillic acid (HVA) in their cerebrospinal fluid.

This particular chemical is the result of a metabolic process beginning with dopamine — a chemical which seems to mediate motor movement. Dopamine — sometimes known as L-dopa — relieves symptoms of Parkinson's disease. But there has been no such luck with Joseph's disease.

Pegged genetically as a dominant disease, it is passed to half the offspring of an afflicted person.

Dominant diseases are not as well understood as recessive diseases, explains Dr. Rosenberg.

"The question is, 'Are dominants also enzyme defect diseases?'" he said. It is known that dominant diseases often involve a number of organ systems.

"Could it be a receptor mediated disease? (Like the high cholesterol problem)," he asks. So far, efforts to identify such an altered receptor protein — even with a new technique of two dimensional gel chromatography — have proved unsuccessful. Dr. Rosenberg has plans for other probes, however, in an effort to pin down the malfunction.

That there are other disease states or syndromes still to be identified is almost a certainty.

"There have to be a lot of them we don't have names for yet," says Dr. Mary Jo Harrod, a geneticist in the Obstetrics/Gynecology Department.

Another problem is that environmentally-caused birth defects can mimic genetic disorders.

One of the most disturbing new realizations is that the damage to the unborn child caused by the mother's moderate to heavy drinking can be profound. Research at the University of Washington Medical School and in Boston City Hospital indicates gross damage in extreme cases.

That genetic vulnerability to specific environmental factors also can be a

problem has been known for a long time, as in the case of the fava beans.

There is also the possibility of an entire spectrum of genetic susceptibility to drugs — pharmacogenetic reactions.

Dr. Harrod said she and Dr. Rosenberg had conferred on the case of an 80-year-old woman in whom certain drugs triggered an acute metabolic disease. And others with a genetically-induced enzyme problem get sick when given a quinine derivative. It is known that people with a certain enzyme deficiency have a susceptibility for emphysema. Research on the exact biochemical combinations involved in lung cancer and agents in cigarette smoking is underway in the health science center's Biochemistry Department.

Hopefully, the bizarre manifestations of some genetic disorders may lead to further understanding of their causes.

Last year, Southwestern Medical School professors collaborated in testing and treating members of a family which is afflicted with a rare disorder which causes children to "self-destruct."

Little is known about "Lesch-Nyhan" syndrome — it is a recessive disease linked to the sex chromosomes and there is a biochemical defect in which the absence of an enzyme causes overproduction of uric acid.

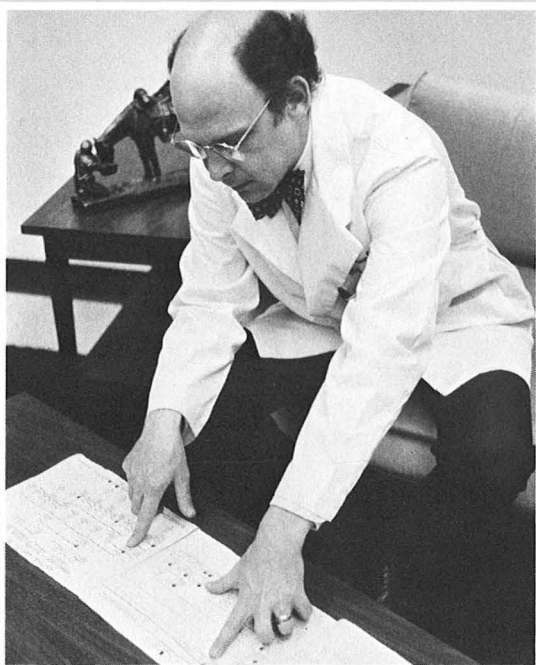
Members of Southwestern's Pediatrics Department have been able to head off the uric acid-problem with drugs, but so far there is no way to aid the compulsive self-destructive acts of the victims. These include head-banging, finger-gnawing and lip-chewing.

Child victims of Lesch-Nyhan syndrome sometimes display hostility towards adults while apologizing for their behavior at the same time.

There are a myriad of other questions: Why do children with cri du chat (cry of the cat) syndrome mew like kittens? Why are persons of European Jewish ancestry particularly vulnerable to Tay-Sachs disease? Why are blacks particularly vulnerable to sickle-cell anemia and why do sufferers of this affliction seem to be immune to malaria?

Ralph Waldo Emerson expressed the human plight in these questions:

"What can I do against the influence of Race, in my history? What can I do



Dr. Roger N. Rosenberg traces out a Joseph family history. He and Dr. William Nyhan of California were the first to identify Joseph's disease.



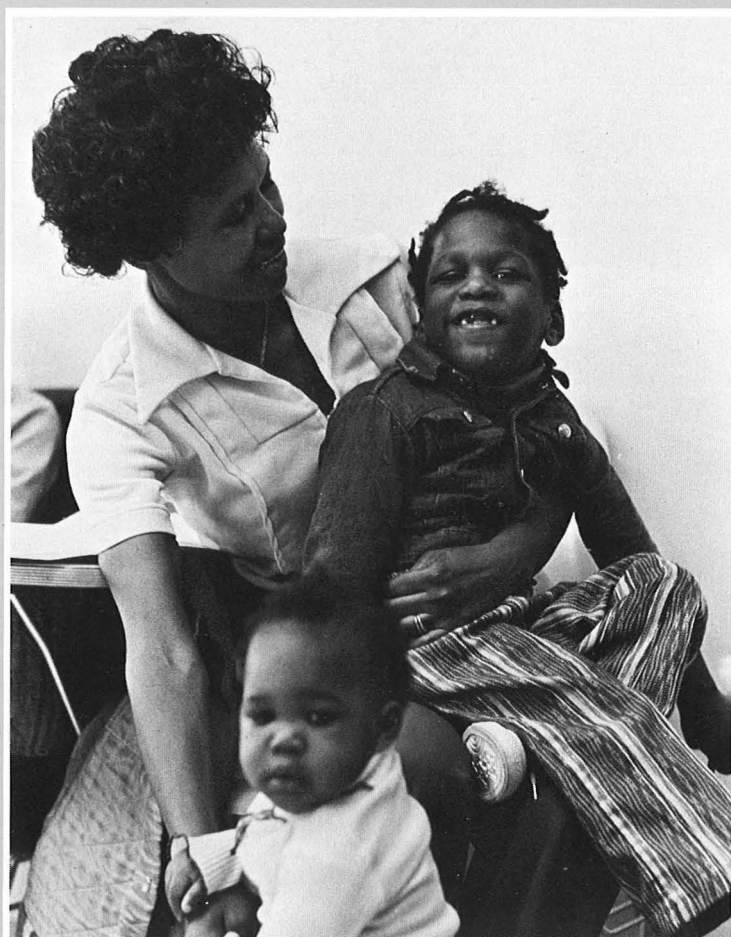
This 12-year-old boy with Joseph's disease showed abnormal posturing of hands.

against heredity and constitutional habits...?"

Research by geneticists at Southwestern and other medical centers of the world already has widened the set of choices available to people today and possibly hastened the day of meaningful direct intervention in the hereditary process. ■



Woman from the village of Faja Zinha on the island of Flores exhibited prominence of eyes and unsteadiness of hand attributable to Joseph's disease.



Victim of Lesch-Nyhan syndrome evaluated at Southwestern Medical School sits in mother's lap. Her younger son is being tested for the malady.

Novros fresco in Gooch Auditorium is a major addition of public art to the Dallas community

Ancient Art Takes on a Contemporary Form

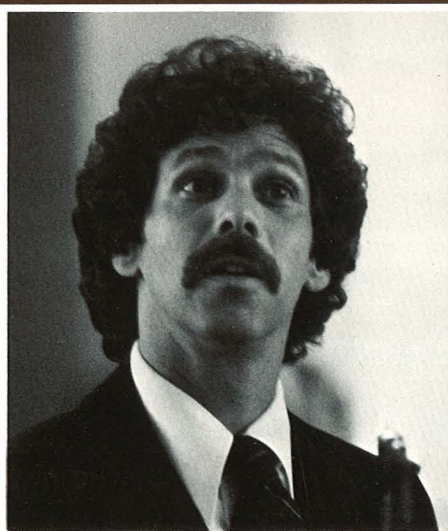
Too much to take in at once, the fresco must be seen time and again. From this angle, from that angle. In the morning light, with the afternoon sun shining through the glass. Like a mountain or the sky, it is a part of the environment to be experienced.

Formally accepted in ceremonies at The University of Texas Health Science Center at Dallas last fall, the *fresco buono* is the work of 37-year-old David Novros. This, the artist's fifth fresco, covers an area approximately 22 feet high and 100 feet long in the foyer of Gooch Auditorium. The complicated piece works with nine wall surfaces.

Fresco buono (or true fresco) refers to a special technique for large paintings that are a part of the wall or ceiling, as the famous Michelangelo painting in the Sistine Chapel.

Novros is proud of the fact that the ochre pigments and oxides came from the same area of Italy where Michelangelo obtained his colors. The master frescoists of that day used many of these same pigments. These ancients were limited to the earth colors in Novros' modern fresco, however. He added brilliant blues for a contemporary look.

As the wet plaster was applied, he mixed pigments with water and lime and worked the mixture rapidly into the prepared plaster. A protective



David Novros

crystalline structure forms during this process, making the paint part of the wall.

This will prevent what has happened to many ancient frescoes. In Federico Fellini's "Roma" *verite* filming captured the literal melting away of frescoes beneath the city as workmen, cutting passages for an underground subway, broke into caves, letting in oxygen. Unfortunately, the chemical composition of these ancient paintings could not withstand the fresh air. Thus, Fellini filmed art history — ancient art disappearing before the modern viewer's eyes.

In Crete the palace of Knossos

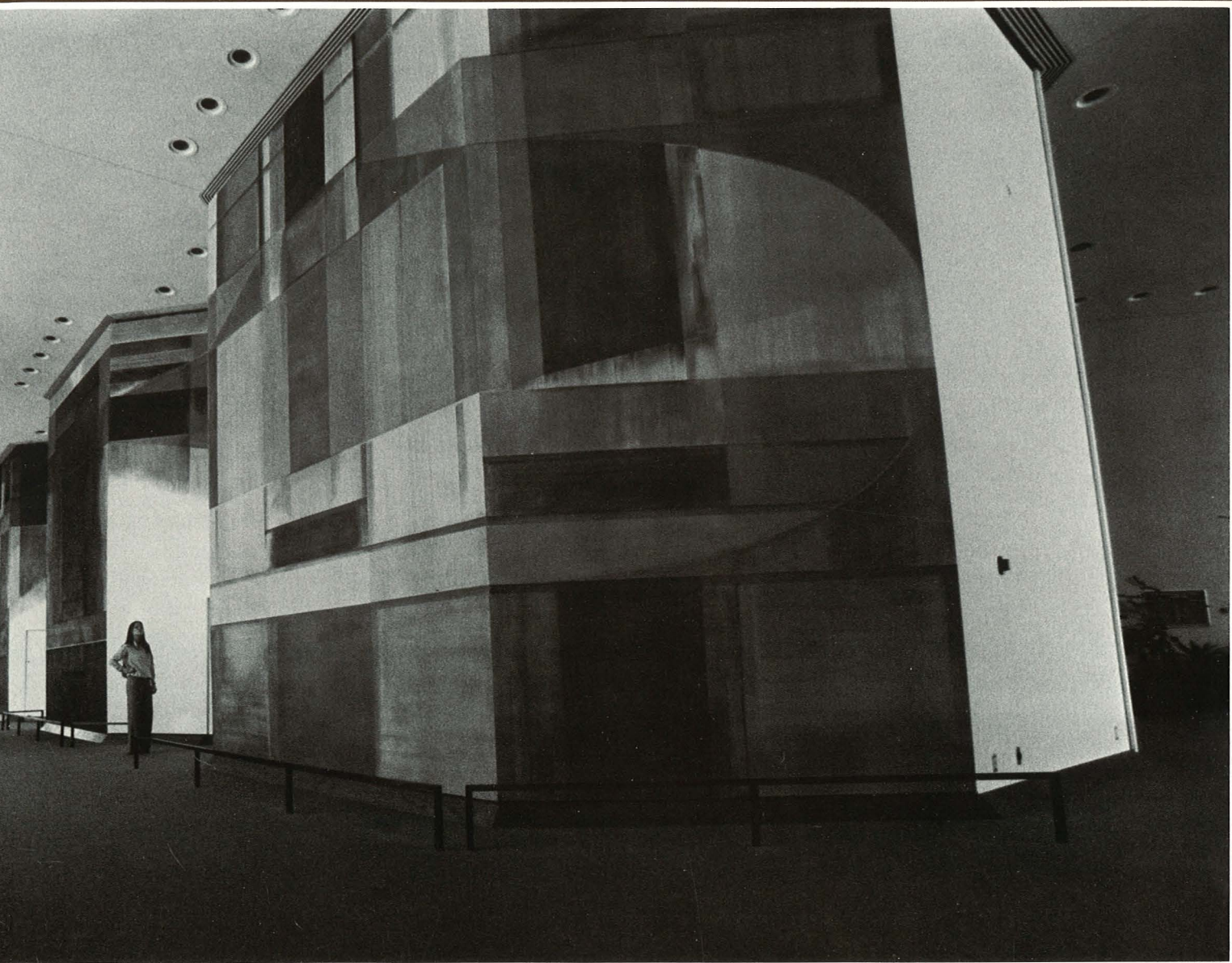


Photographs by Darryl Baird

was decorated in this fashion before 1500 B.C. The frescoes at Pompeii are thought to date from the first century A.D.

The works of Michelangelo, Fra Angelico, Giotto, Masaccio, Piero della Francesca and others in the fourteenth and sixteenth centuries brought this art form to its highest glory. The seventeenth and eighteenth centuries brought Europe renowned frescoes by Carracci, Pietro da Cortona, Baciccio, Tiepolo and Goya.

Except for a few examples, the style fell into disuse, being revived in both Mexico and the United States in the 1930's. Orozco,



Siquieros, Tamayo and Rivera's politically inspired frescoes brought a new art form to the tradition of Mexican folk art. Across the border, the American government was encouraging artists during Depression days by commissioning murals in public buildings through the WPA. In fact, Dallas is fortunate to have another fresco — a Peter Hurd on one wall of the Terminal Annex Post Office.

The suggestion of a fresco for Gooch Auditorium came from Robert Murdock, curator of modern art at the Dallas Museum of Fine Arts. Familiar with Novros' work, he felt that *fresco buono* would be fitting for

the space and for this particular public building. The President's Special Advisory Council on the Arts invited Novros to submit sketches of such a work. This group is chaired by Pat Spillman, partner in the architectural firm of Fisher and Spillman, Inc., construction coordinator for the new campus facilities. Other members of the committee include Mrs. Craig Smyser, Mrs. John O'Boyle, Mrs. Charles C. Sprague, Enslie Oglesby and Betty Ann Thedford of The University of Texas System. The fresco was made possible by a generous gift from Mrs. Eugene McDermott.

On approval of the artist's plan,

certain structural changes in the wall had to be made. Not only did the fresco require expertly laid plaster as a base, but the nine-section wall had to be canted 12 inches at the top. The doors leading to meeting and storage rooms presented an additional challenge.

At the acceptance ceremonies Novros complimented the school as a whole for the splendid cooperation he and his co-workers received. He expressed gratitude not only for the work of the school's administrators and architects, but also for the work of his assistants, the carpenters, maintenance personnel and cleaning crews whose coopera-

tion was necessary in carrying out the difficult undertaking.

David Sutphen, his assistant, agreed.

"This had to be one of the best places to work in public we can imagine. There was nothing we needed we couldn't get."

On completion of the fresco, Murdock had this praise for Novros and his work:

"Its obvious success is a real testament of David's creativity, his sensitivity to the inter-relationship of form, color and structure, his technical mastery of fresco, and most of all, his vision . . . This work is not only a major addition of public art to this institution and this community, it is of decided national importance and will . . . serve as a model for future public art projects in this country."

ARTIST

"I don't even care whether you like it — I want it to be *used*!"

These are the words of New York artist David Novros, commenting on the fresco he had just completed.

"As long as painting of this sort is 'used,' its permanence is guaranteed," he explained.

The health science center commission gave Novros the opportunity to do a public building where his artwork would be a part of the daily lives of people. Novros also feels strongly that art should take "precedence over its creator."

In fact, the slight, curly-haired artist shied away from publicity when he was on campus, turning down most press interviews, banning photographers and blending into the student body during his infrequent travels around campus.

Many of Novros' paintings have been large-scale works concerned with particular walls and spaces. This involvement along with his admiration for the old masters' frescoes in Europe led the boyish-looking artist into an investigation of the ancient medium.

Much of his work has been done in oils and acrylics. His first one-man show took place in New York

two years after he left the University of Southern California in 1964. Since then, he has participated in numerous showings on this continent and in Europe. In Texas his works may be seen in public collections at the Dallas Museum of Fine Arts, the Houston Museum of Fine Arts, Rice University's Institute for the Arts and the Fort Worth Art Museum as well as at Texas Gallery, his southwestern outlet, in Houston.

The California native, whose parents flew in from Los Angeles for the acceptance ceremonies, told the assembled faculty, students, staff and members of the Dallas art world that he appreciates the opportunity to share his work with many people over countless years.

"Few such commissions exist for painters," he said. "Hopefully, this project will make clear what a valuable public experience art can provide when placed in a contemporary context."

ARTIST'S ASSISTANT

"A contemplative work," is how artist's assistant David Sutphen describes the Novros fresco.

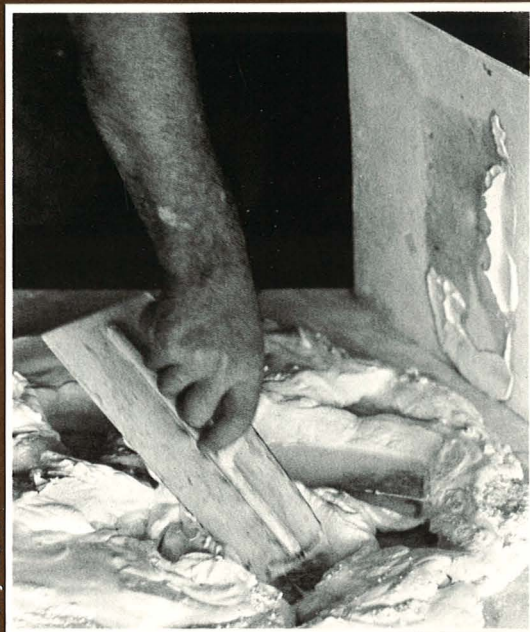
Sutphen's interest in technique made him jump at the chance to work on the fresco commissioned by the center last year.

"The medium itself is so little used that when this opportunity presented itself, I felt I *had* to get the job," the navy veteran said.

A former art student at UT Arlington, Sutphen was acquainted with Novros' work — oils and acrylics in art publications, as well as the two paintings in the Fort Worth Museum of Modern Art, where he had worked while going to school at UTA.

Now 33, the West Texas native has been painting for 10 years. But he's been an artist by his own definition only three of those years. The quiet, blue-eyed young man was majoring in architecture and had never considered art as a career. But after several courses related to his major studies, "it all just clicked."

Currently working with Japanese lacquer in a contemporary vein, Sutphen says all his work up to now



Darryl Baird

In true fresco the paint becomes a part of the plaster.

has been "exploratory." He is just this year at the point where he thinks he is ready to show.

Sutphen said that knowing Novros' work, "I also knew that if I could work with him, it couldn't be anything but good for me.

"It was more of a learning experience than anything else, especially seeing his involvement, how the plaster was applied, what a total experience the painting was — things that you're not able to pick up anywhere else. The experience was totally involving."

Once the two were up on the scaffold, he said, they were there for the day. He explained that he did not actually paint — he was there to hand Novros rules and brushes and to assist the artist in any way he could.

Of course, now Sutphen is hooked. He'd like to do a fresco himself.

MASTER PLASTERER

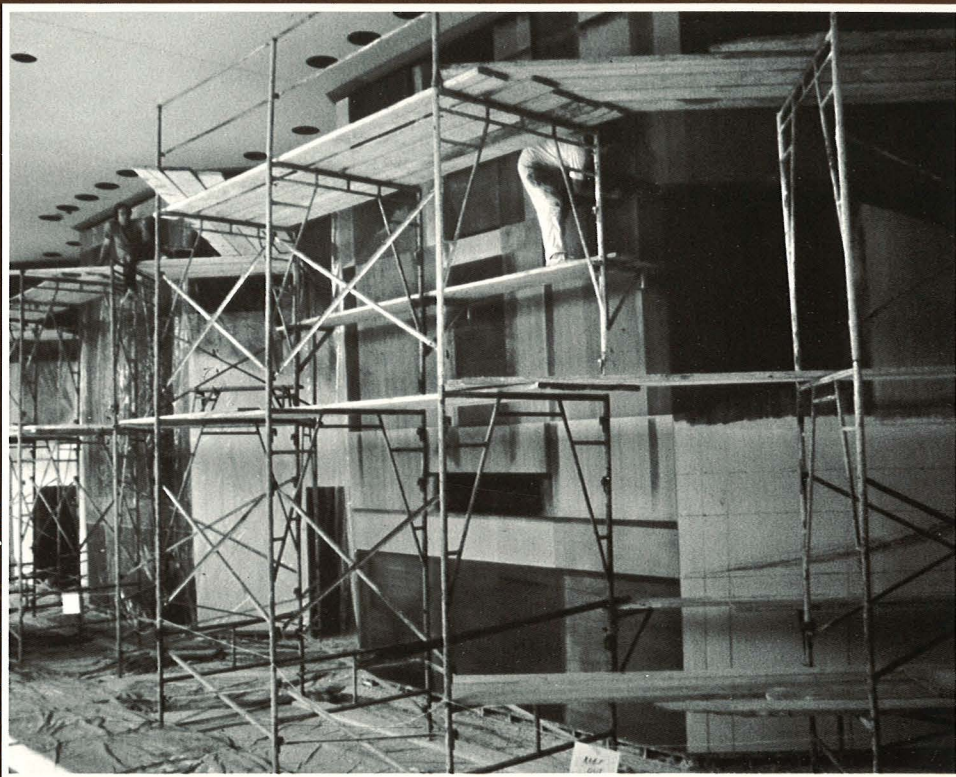
When master plasterer Bill Black emigrated to the United States 20 years ago "to make his fortune," he had no idea he would be bringing a rare skill to the art world.

Black had worked on murals and frescoes in his native Scotland. There, he related, it is quite com-



Novros checks with the plasterer's assistant early in the progress of the work.

Photographs by Buck Wynne



Novros and Sutphen at work.

mon for public buildings, such as libraries and museums, to be decorated with murals and frescoes. As a plasterer, he had prepared the walls for several scenes.

These scenes, in contrast to David Novros' most recent work, however, usually depicted pleasant landscapes or great historical battles. The Novros fresco features elliptical linear patterns and repetition of colors. However different though, Black pronounces it "wonderful."

"It was just fantastic to watch," the 45-year-old Scotsman said. "Fantastic, too, to watch him do the arcs . . . to see things blend into each other."

Black worked closely with Novros for 10 to 12 weeks of the project. The plasterer, assisted by Josh Walton, worked from seven to 10 or 11 each morning until the outline for the day was done. Novros drew the shapes

on the wet plaster with a light-colored paint on a paintbrush, Black explained.

"If he (Novros) scratched the plaster, like with his elbow, as he was making his marks, I'd have to stay there to patch it up." Then he would go on to another job for the rest of the day.

The whole art crew, including the plasterers, usually worked six or seven days a week. The artists usually spent two hours in preparation and then eight or more on the scaffold.

Black, who admitted with a grin that he "never made my fortune yet," has found a kind of immortality in Texas, his adopted home.

Novros, whose views on art include the belief that the work is more important than the artist, saw that the commemorative plaque in front of the fresco followed this philosophy — it carried not only his name,

but the names of his assistants.

The master plasterer had not noticed the small bronze rectangle at the acceptance ceremonies. Overwhelmed at the news that his name is on the plaque, too, he said he would just have to come back and see it for himself. ■

ANN HARRELL

Undergraduate program in gerontology aims at improving 'quality of life' among the elderly

Allied health school trains workers for senior citizen centers and homes while researching key issues

By CHRIS LAND

Nursing home administrators often are not sensitive enough to the needs of their residents, says 42-year-old Art Cohen.

Cohen's wife had worked in nursing homes for a number of years and he had helped her at times. From what he had observed, he felt that "there must be a better way." To develop that "better way" he enrolled in the new Gerontological Services Administration Program at the School of Allied Health Sciences soon after retiring from a career in the military.

Many of the students presently enrolled in the program are like Cohen: middle-aged and switching careers, says Dr. Charles White, director of the program, which

began last fall.

The program is one of only a handful in the country that offer an undergraduate degree in gerontology. Most are at the master's or doctoral level.

"Graduates of our program are eligible to take the state licensing exam for nursing home administrators," Dr. White said. "They also are well-qualified to work as administrators of senior citizen centers and in state and federal programs for the aged."

As the size of the nation's population over the age of 65 continues to increase, the need for individuals trained in gerontology and in the management of services for the elderly also will increase. The new

program was created to help fill that need for the state of Texas.

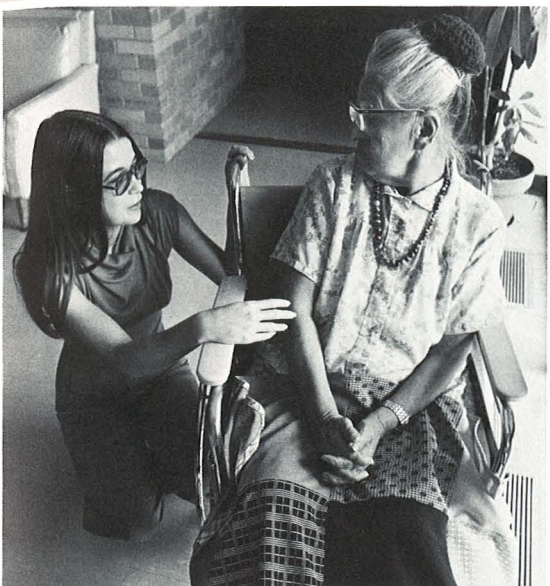
In addition to the bachelor of science degree, which takes two years to complete after two years of college elsewhere, the gerontology program offers a certificate for 12 semester hours of work. This certification is designed for workers with the elderly who want to improve their skills but don't want to attend college full-time or work toward a degree.

Nursing home administrators receive continuing education credit on their licenses by taking the courses offered by the program. The gerontology faculty also teaches continuing education courses for



Dr. Helen West adjusts biofeedback equipment that detects muscle tension in forehead of nursing home resident Eva Stevenson.

Darryl Baird



Susan Schellie, assistant director of the gerontology program, visits with a resident of Golden Acres.

nurses and social workers across the state through a contract with the Texas State Department of Human Resources.

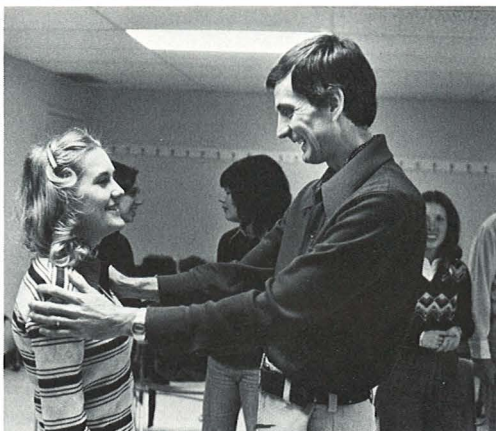
Besides teaching duties, the program's faculty also are involved in a number of research projects:

- Instructor Dr. Helen West is studying the feasibility of biofeedback therapy for treating and preventing chronic illness in the aged.

"Previous studies have shown that biofeedback is effective in reducing physical symptoms such as migraine headaches, high blood pressure and other chronic conditions," Dr. West said. "But there is very little in the medical literature — one or two isolated cases — about biofeedback training being given to old people. Our study of biofeedback is one of the first to concentrate on a geriatric population."

Dr. West hopes to show that with biofeedback a lot of the illnesses that older people suffer from can be either prevented or alleviated by teaching them how to combat anxiety and depression and to relax physically. "I think a lot of the diseases in our society are psychophysical: they are directly related to stress. In the nursing home this is especially true because there stress and depression are widespread. Through biofeedback therapy,

The goal is to design nursing homes that disrupt the residents' lives as little as possible, says Director Dr. Charles White.



Dana Tow (left) and Adjunct Instructor Dr. Hanno Weisbrod during Dr. Helen West's class on non-verbal communication.

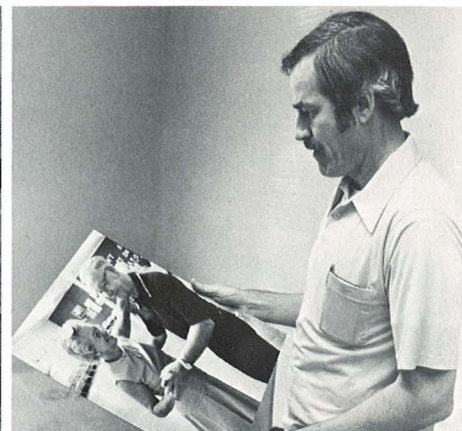
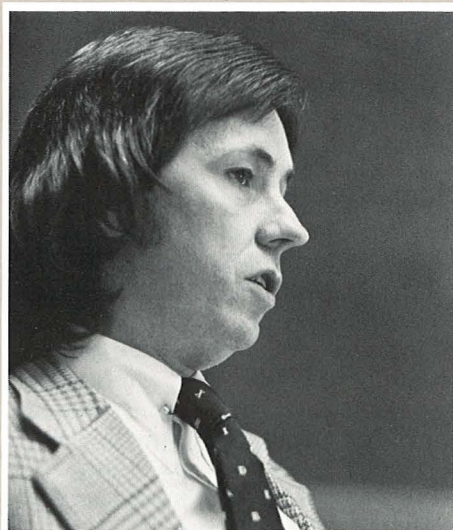
tension levels can be reduced, thereby resulting in a decline in tension-related maladies."

If the results of this and further studies are positive, the scope of care given to older people could be vastly improved, she believes.

- Dr. White recently received a \$100,000 grant from the National Institute of Mental Health to conduct a two-year study titled "Heterosocial Behavior in the Nursing Home."

The stress and depression seen in most nursing home residents could be prevented by healthy social interaction, Dr. White said. "But in most nursing homes, social behavior is not well supported and there is a definite lack of privacy."

Sexual behavior, in particular, is disrupted by the institutionalized environment, he continued.



Student Art Cohen sorts through pictures being used to research what the elderly find attractive in each other.

"In our study we will look at Texas nursing homes in terms of how the institution influences the sexual behavior of the residents. The long range goal is to design institutions which allow people to do the things that they would do if they were outside the institution."

"I don't think there is any reason to deny the elderly the normal pleasures of life. They need affection and love and intimacy as much as any of us. The point is that we need to become more concerned with these important aspects of people's lives when we institutionalize them."

- In a related study, Dr. White and Assistant Professor Dr. Doug Johnson are studying what the elderly find attractive in each other. They are attempting to determine whether or not our tastes change as we grow old and, if so, how?

- Dr. Johnson is also doing a study of the "quality of life" for the elderly found in urban and rural areas in different parts of the country. Are old people better off in urban Florida, rural Texas or urban New York? Where do they report the greatest sense of satisfaction with their lives?

- Dr. Charles McConnel, assistant professor, specializes in the economics of aging. He is currently researching age discrimination: what kinds of discrimination are workers 45 and older subject to and what are the economic benefits and costs of changing the age of mandatory retirement to 70? He is also studying the way health deterioration determines an older worker's participation in the labor force.



Susan Wilson

He's built like a bois d'arc corner fence post with a barrel chest and eyes that twinkle under a big roll-brim felt hat. And he's standing there in a woolly sheepskin coat holding a small black bag in one hand and ringing the doorbell with the other.

"Pardon me, but can you tell me where 6345 is?"

The man at the door appears startled.

"Is that a doctor bag?" he asks.

"Yep," says Dr. Ross.

"Would you mind waiting here a minute while I call my wife?"

"Sure."

"Honey, come here, there's something I want you to see—a real doctor making a house call."

After 22 years of making house calls in the country, Dr. William Ross

has moved to the big city and a big job as chairman of UT Southwestern Medical School's Division of Family Practice in the Department of Family Practice and Community Medicine.

Dr. Ross left his practice in San Benito, Texas, because "I've never done anything like this before, for one thing . . . and I love the school. This is where I graduated; I have a lot of friends here."

He thought for a minute, then leaned forward.

"I guess I wanted to have an opportunity to have a say," he continued. "The place the family practitioner has in society today is going to accelerate, as well as the type of relationship he has with his peers in other disciplines."

As a member of the Texas Medical Association's Council on Medical Education and Hospitals, Dr. Ross had worked with both President Charles C. Sprague and Southwestern Dean Frederick Bonte in attacking problems in education.

Continuing this TMA association, the rugged, white-haired physician brings to his new position both the breadth of his knowledge of where Texas stands as to medical care and the depth of his understanding of human beings.

"I've been enjoying getting acquainted with some of the students since I've been here," he said. "A few have dropped by to talk about family practice and what it's like."

"I ask them a few questions, too,"

The Doc's a 'family' man

By ANN HARRELL

he related with a twinkle in his eye.

"What are you learning?" Not in classes, in their lives. "Do you know your neighbor?" "What about where you buy your groceries?" "How do these people live and what are they doing?" These are the kinds of questions I ask them.

"And house calls," he continued, "you learn more in 15 minutes about a family you're taking care of than in a year-and-a-half of seeing them in a sterile environment. You get to know your patients."

Is this an efficient way to deliver health care?

"Maybe not from the view of the man who carries a stopwatch," Dr. Ross answered. "But if I were going to open a practice here today, that's the way I'd start."

Making the patient responsible for his own health is one of the aims of family practice, said the doctor. Once the patient begins to feel confident and accept this responsibility, both can do better jobs.

A native of Mount Enterprise in East Texas where members of his family have been general practitioners since the 1830s, the physician says he sees family practice the same way in Dallas as in Cushing, Texas.

"I don't see any basic change — the family practitioner is ideally still the confidant, the neighbor of the person he is taking care of. And we will still see much of the same continuity of care in taking care of the same families — from babies to grandmothers — over a number of years in a community setting."

Also, Dr. Ross explained, the family practitioner in the city has another goal in common with his counterpart in a small town, that of providing access to the health care system. When the patient's physical, or even emotional problems need attention from a specialist, the family doctor is a trusted source of referral.

And, while some might point accusingly at Dr. Ross as an idealist living in the past, he is essentially a realist. Much of his time and effort deals with looking at the future of medicine in Texas and planning for the best possible health care for its citizens.

He, along with his department head, Dr. Winfrey Goldman, Jr., and Dr. Bruce Jacobson, director of UT Southwestern's family practice residency at Fort Worth's John Peter Smith Hospital, is keenly aware of the need for more physicians in the state.

"We know that Texas has tremendous primary care needs. In fact, right now we are by national standard some 2,500 primary care physicians under standard. And of this number, 50 percent are in family practice," stated Dr. Jacobson.

This need, however, is not just for more physicians. Even more important is the distribution.

According to the Fort Worth physician-educator, there are at least 20 counties in Texas with no physicians at all. And the average age of the practicing family physician in the state is 58.

"These are reasons I believe that the state legislature will continue

to look favorably upon funding family practice training programs in the future," he said. In fact, the Southwestern program is in the process of expansion. According to Dr. Jacobson, it is expected that there will be over 100 new residencies in the state by 1981.

And, he stressed, the various medical schools are working cooperatively to serve the state by meeting together to plan the locations and affiliations of the new "satellite" residency program. These, he said, will be spread around the state. Southwestern will open an extension of the Peter Smith residency program July 1 in Wichita

Bill Ross sees his new job as a challenge.



Susan Wilson

Texas physicians create a specialty training program based on their own years in private practice.

Falls. Other satellites in West and East Texas are being planned for the program. In addition, a second Southwestern family practice residency will get underway at St. Paul Hospital in Dallas July 1.

Is the Peter Smith program encouraging residents to practice in areas of need in order to help with the problem of physician distribution?

"The only mechanism for encouragement is this: If we had two applicants, two medical students applying with equal credentials, one of whom planned to practice in Houston and one in Muleshoe, the one who planned to practice in the smaller community would probably have a better chance of selection. In other words," Dr. Jacobson explained, "we are trying here to face up to the needs of the people of the state of Texas. That's the reason for our being." He added that in the interview process the committee considers the applicant's feelings about being

a part of a community, his hometown, his wife's hometown and her feelings.

Dr. Ross sees as unrealistic the idea that physicians who are "forgiven" educational monies will stay in tiny, isolated communities past the required period of service. The National Health Service recently found that only one out of 39 such young physicians stayed beyond their rural commitments in small towns away from the cities.

He feels that family practitioners will be inclined to settle within cities, in the suburbs and in towns of 10,000-25,000 population with access to a major medical center still a major factor in a community's attracting new physicians. The increasing application of technology to medicine, however, through such devices as telephone EEG's and telemetry X-rays, will bring the small town "doc" into instant communication with major medical schools

around the state. Also, a TMA task force on which he serves is working on the problem of recruiting physicians for underserved areas.

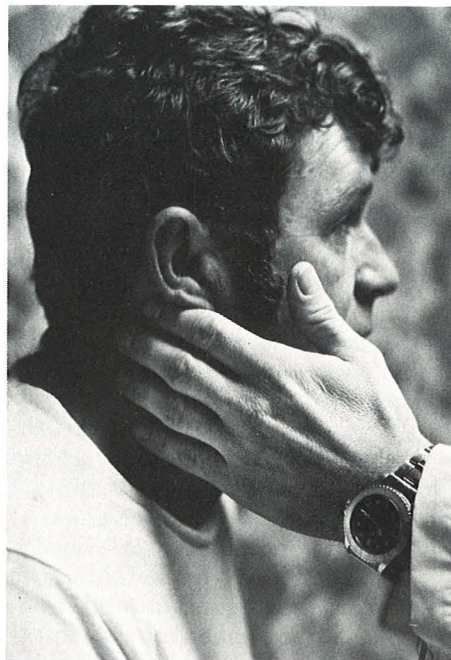
While it remains to be seen whether family practice will follow the pattern of more established medical residencies with the majority of residents settling within 100 miles of their training institution, the UT Southwestern faculty hopes so. That's a major reason for the "satellites" in small cities in East and West Texas.

John Peter Smith Hospital itself is a county facility which has been well known since 1938 for the training of general physicians. The UT affiliation began in 1973.

Dr. Jacobson, who lives in near-by North Richland Hills where he had a medical practice for 18 years, sees a major advantage in having a family practice program in a hospital like Peter Smith. There are few residents in other residency programs, he said, thus the family practice resident has first access to the patient.

A common question Jacobson hears is "How does family practice differ from the better-known general medical practice of the past?"

The physician reassures the daughter of an elderly patient who was brought into the emergency room the night before.



Tom Steffen checks a patient after a bad fall on the ice.

Photographs by Susan Wilson

"We feel that the family practitioner of today does what the general practitioner did in the past — but he's better trained for that task," answered Jacobson.

"Years and years ago," he continued, "almost all doctors trained in medical schools were in general practice. Then specialties came into their own with the beginning of the ophthalmology specialty many decades ago. As it became a traditional thing that medical schools began to direct their attempts at education for specialty areas, general practice training gradually began to die out."

Now, however, he explained, people realize that the physician serving a whole family was meeting needs that specialists and subspecialists cannot. They also were there to provide an entry into a complex health care system.

"It's very difficult — and expensive — to see a neurosurgeon when you have a cough," he concluded with a grin.

When the UT program began in 1973, it joined the already-existing general practice residency at Peter Smith and modernized it, according to Dr. Jacobson. First, the training

period was extended from 24 to 36 months. Second, a family health center, where physicians are more oriented to caring for people in a humanistic way, was added. This family health center model is required for all family practice residencies.

"Here," he said, "the emphasis is more on people than disease."

This residency is the largest training program for family practitioners in the state and one of the largest in the Southwest. There are currently 52 residents in the three-year program, with 20 slated to finish this year. Graduates become certified in this relatively new specialty upon passing their board exams.

"We give our residents a good background in all of the major disciplines of medicine as well as surgery," Dr. Jacobson explained. The emphasis is on the "real medical needs of people." Residents get heavy training not only in surgery but also in obstetrics/gynecology and pediatrics as well.

These skills are vital because people seem to want their medical care near home, the physician pointed out. This makes it even more important for the family physician to

be proficient in a wide range of skills.

"In my practice, which was located only 12 miles from downtown Fort Worth, I had to do a lot of arm-twisting, for example, to get patients to be transported to the city for more extensive medical care than I could render in any local hospital," he said.

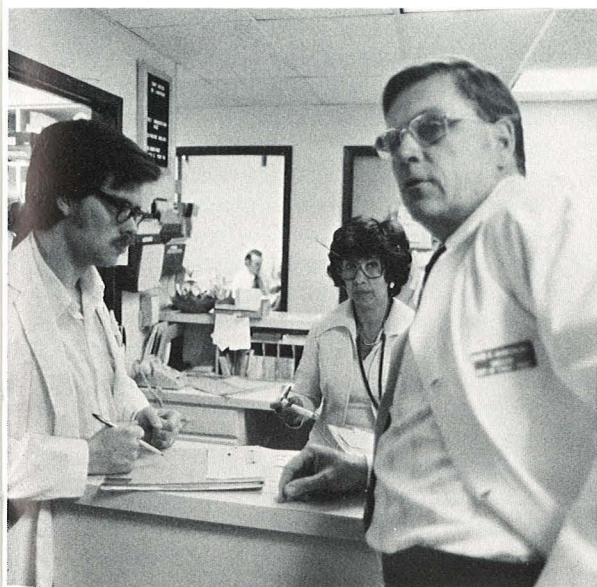
To prepare young doctors for this kind of situation a resident at John Peter Smith "jumps right in" on his or her first day. "They're immediately given much more responsibility than they ever had as a medical student," said Dr. Jacobson.

This "jumping right in" is just what made Dr. Jess Thompson, a second-year resident, choose the Peter Smith program. He said that Smith's program gives the resident "more responsibility than any other I could find."

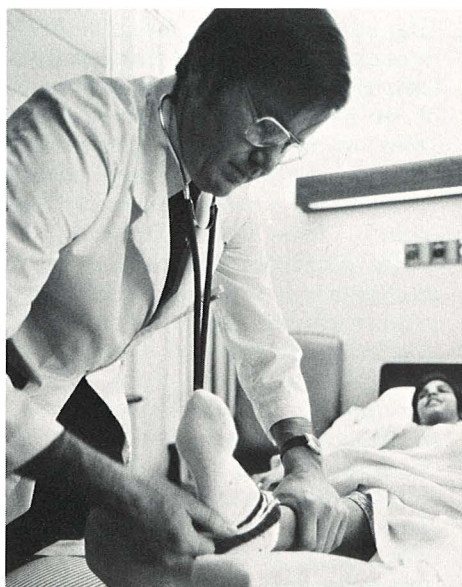
Dr. Thompson is all for "doing a little bit of everything," which was one of the attractions of family practice for the former Navy pilot. At 34, older than most of the other residents, he feels like he's "starting five years behind."

Dr. Thompson is "catching up" fast, however.

During his first year as a family



Dr. Bruce Jacobson supervises residents at John Peter Smith and the Family Clinic. Here he checks with the clinic staff.



Second-year resident Jess Thompson and patient.



With a sense of awe, Dr. Grandison approaches a baby with a rare brain tumor.

Photographs by Darryl Baird

The mother's doing fine; the baby had to be sent by ambulance to Fort Worth.



The patient and doctor present a study in concentration. The daughter of a hospital patient, she fell on the ice while visiting.



practice resident, he had four months experience on medicine service and two each on surgery, pediatrics, OB-gyn, and emergency. He also began to develop private patients by spending one half-day each week in the John Peter Smith Family Clinic, seeing his own patients and referrals from his supervising physicians.

As a second-year resident Dr. Thompson follows a routine similar to the previous year's. Psychiatry service, however, is added to the work load, and surgery is increasingly emphasized. This year he spends two half days per week at the clinic.

Most of the residents are grateful for the increased emphasis on psychiatric training. Since the clinic now has a full-time psychologist, residents are getting training in how to give psychological testing, dealing with dying patients and helping the family deal with grief, Dr. Kathy Grandison pointed out.

Dr. Grandison, a third-year resident, concentrates on hematology, radiology, dermatology, allergy, orthopedics and other specialties, as well as continuing work on previous services. She wishes there were more time for electives.

"There's just not enough time, period," she said with a smile.

Residents also spend from four to six weeks in an internship program in community medicine.

"This time could be spent on an Indian reservation, with a physician in a small town or working with a city doctor in private practice," Dr. Jacobson said.

During the third year their family clinic time is up to three half-days per week for private patients. And by this time, the young physicians are seeing several families they may have been following for two years. Nor are they overworked in the clinics. The receptionists book no more than six patients in a half-day for each resident.

Developing relationships with the patients is one of the strengths of the family clinic aspect of the training, Dr. Jacobson believes.

"I've seen them (the patients) bring their doctors cakes; they bring them all kinds of gifts and flowers and vegetables," he related.

A graduate of the Peter Smith residency — and a believer in its philosophy — is Dr. Thomas Steffen, who began practice in Decatur, Texas, (near Denton) in July, 1976.

A graduate of Tulane Medical School who did undergraduate work at North Texas State University and Southern Methodist University, the young physician said he picked

Peter Smith because "its reputation was awfully good as far as training residents to handle just about whatever came in."

"We do that here. When it's an emergency you can't say, 'We'll call someone else.'"

Asked about a typical work load, the physician counted the cases off on his fingers.

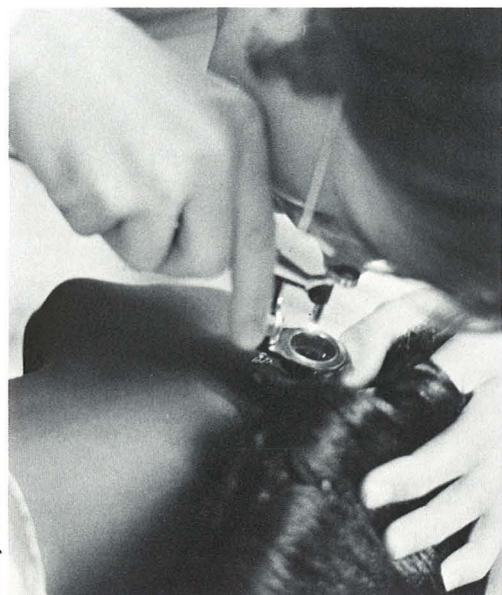
"Well, I've got a section I'm going to do day after tomorrow. And I helped on an emergency section Saturday. I put on about three casts a week — I wish I'd taken a little more orthopedics. I send patients into town once in a while," he said.

"I just diagnosed a guy who's having temporal lobe seizures and am sending him to a neurosurgeon for further evaluation. Can't find any tumor yet, but that seems to be a possibility. I treat a lot of heart patients — heart attacks, and put them in the hospital..."

The list went on and on.

Dr. Steffen said the four and one-half doctors in Decatur (one has half an arm, he joked) see "everything under the sun." And he appreciates the family clinic experience at Peter Smith.

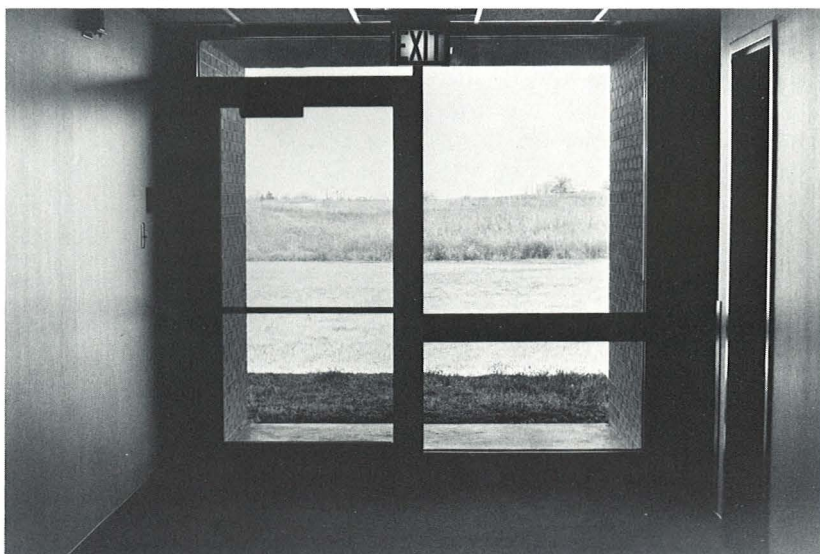
"You get to see what clinic life is like, the way it is in real practice. The local 'docs' that came in and helped us really gave us good



Darryl Baird

Dr. Thompson sees a private patient in the family clinic.

Decatur Community Hospital looks out on the countryside.



Susan Wilson

insights into what was going on. They also taught us quite a bit about medicine at the same time. We had a little lab set up there in the clinic that we could use, the kind most doctors have in their offices," he said.

What is Dr. Steffen's typical day like now?

"Well, it really surprised me," he said.

"The first day I was open — no sign, no ad or anything — I had 10 patients. Word of mouth really travels in these small towns. Now I get up in the morning about seven, go over to the hospital and make my rounds. I'm usually done by nine o'clock and then over to the office to see people by appointment and walk-ins until noon. More patients and more rounds. And when I'm on call, I'm up and down all night, it's rough," he concluded. But with a satisfied look.

He shook his head admiringly.

"Typical patients up here are tougher than nails. A man comes in with his back hurting and you ask if he did anything strenuous.

"Well, no."

"Are you sure now? What did you do yesterday?"

"Well, one day I fell off of a hay loft and was out for about 30 minutes."

"When he came to, he said, 'Well,

I need to mow that last 30 acres, so he went out and mowed it — only he couldn't turn his head around sideways. He'd busted a bone in his neck."

As a solo practitioner, Dr. Steffen rotates being on call with the other town doctors. But Dr. Ross sees doctors today as less willing to take on the added burdens of solo practice.

"There's increasing acceptance of group practice, and I think we'll see this more and more, even in small towns," said Dr. Ross.

Both residents agreed with the older physician.

"I was thinking maybe a solo practice would be all right when we got into a week with surgery and emergency day and night — I changed my mind. If I had that all the time by myself, I'd go bananas pretty quick," said Dr. Thompson.

Dr. Grandison said she would like a practice with two or more doctors. She also plans to use a nurse practitioner.

"People just have to realize that a doctor has a right to a life, too. And you have to establish time off and week-ends away right at the first. You can't say, 'Well, I'll work hard the first year and then take off.' It'll be too late."

Whether he or she works in a

small town or a city, in a group or solo, Dr. Ross still sees the family practitioner as "the confidant and neighbor of the person he (or she) is taking care of."

"Confidant and neighbor" — that's what makes family practice special. ■

FRONT and CENTER

Health science center news roundup

Rape Program

A comprehensive rape program, with all rapes reported in Dallas County processed by the obstetrics-gynecology emergency department at Parkland, has resulted in one of the best rape prosecution and conviction records in the country.

By centralizing the examination and treatment of alleged rape victims, the program assures that a specially trained team will take care of not only the rape victim, but also the rape evidence.

"When you have really good physical evidence, the suspect is usually going to plead guilty," says Dr. Irving Stone, chief of the physical evidence analysis section of the forensic sciences institute. On the other side of the coin, the analysis of physical evidence also may show that a man who has been accused of rape is, in fact, innocent.

Byrd House

Nobody ever accused university police officer Flo Byrd of being lazy. A security guard on the Sunday through Thursday evening shift at the center, Flo spends her mornings as a domestic worker.

So what does she do in her spare time? Right now, she's finishing up a den-kitchen and double garage she started a couple of years ago when she began buying up 2 x 4's and bricks from torn-down apartment buildings. Since then, she's taught herself brick laying, a little bit of carpentry, and has become the biggest tourist attraction in south Oak Cliff thanks to newspaper and TV coverage of her ambitious project.

Even the city building inspector has been by to see her work, and he says, "It would take a cyclone

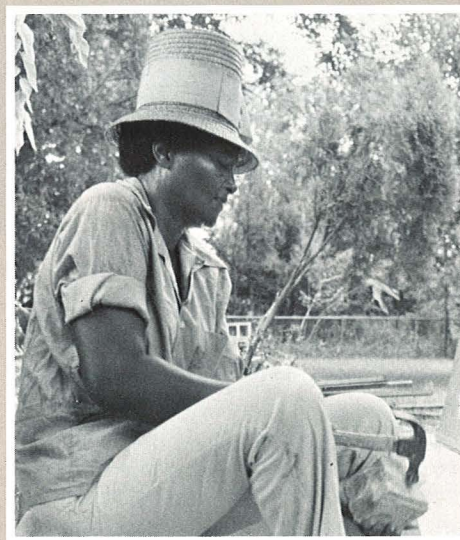
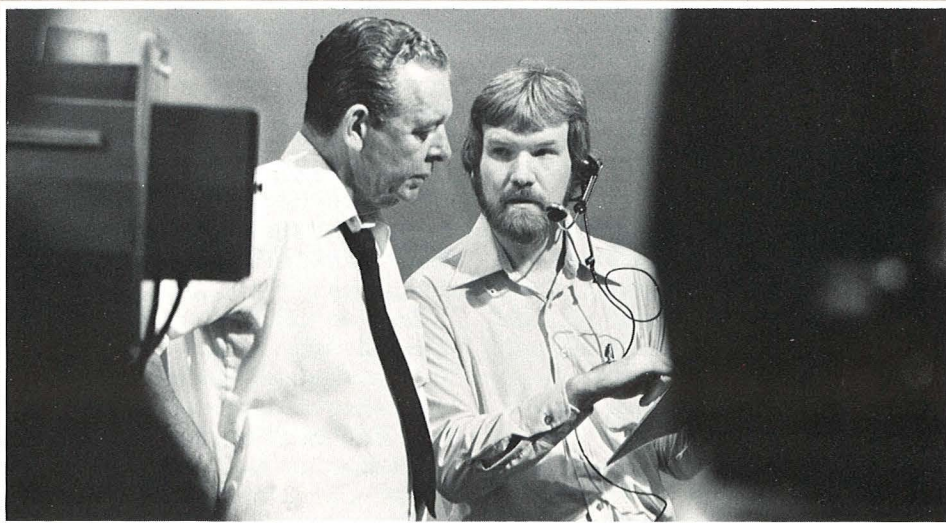
to get those walls down." And Flo's not finished yet. Says the ambitious lady, "I think next I'd like to learn cabinet-making. You know, people need to know how to do more than one thing."

Derma Vision Special

New York producer-director Marshall Jamison (producer of public TV's "Anyone for Tennyson?") and two assistants, working with the health science center studio production staff and facilities, pulled off a marathon three-hour live TV special with spectacular results.

The closed-circuit special, called "DermaVision," was broadcast from the center's studio to the Dallas Convention Center for the annual scientific meeting of the American Academy of Dermatology in December. The special consisted of six half-hour programs, televised back-to-back, with each segment presenting a different topic starring dermatologists, patients and research technicians.

Jamison (left) and Mike Sheridan prepare for TV special.



Flo Byrd reclaims bricks.

The 7-to-10 p.m. program was seen by some 1,400 AAD members on a 15-by-20-foot screen, and each segment allowed audience participation in the form of a 10-minute question and answer session with that half-hour's panel of experts.

Burn Hotline

The health science center inaugurated a prototype burn "hotline" in January. The "hotline" provides physicians and other health personnel in the Regional Burn Demonstration Program area with almost instantaneous emergency consultation with burn specialists from the center and the Parkland Burn Unit.

The "hotline" is a telephone system staffed around the clock by trauma physicians specializing in burn care. It also offers free consultations with any medical personnel who work with burn patients.

The regional burn program, which includes Trinity Valley (Fort Worth), Permian Basin (Odessa), West Central Texas (Abilene), and the Panhandle (Amarillo), is one of six Regional Burn Demonstration Programs to be opened across the country, and the first to open a "hotline." The program is funded by the Emergency Services Administration of H.E.W. under a three-year contract, and will also serve as a clearinghouse for the evacuation and transport of burn patients, education on the treatment of burns and data collection.

Dr. Charles Baxter, professor of surgery, is project director. He and Dr. Phala Helm, chairman of the Department of Physical Medicine and Rehabilitation are co-medical directors of the regional program.

Burn therapist Margey Head



Infertility Isolated

Small, benign pituitary gland tumors are fast becoming recognized as a leading cause of infertility in the nearly 15 percent of married couples in the United States who are infertile.

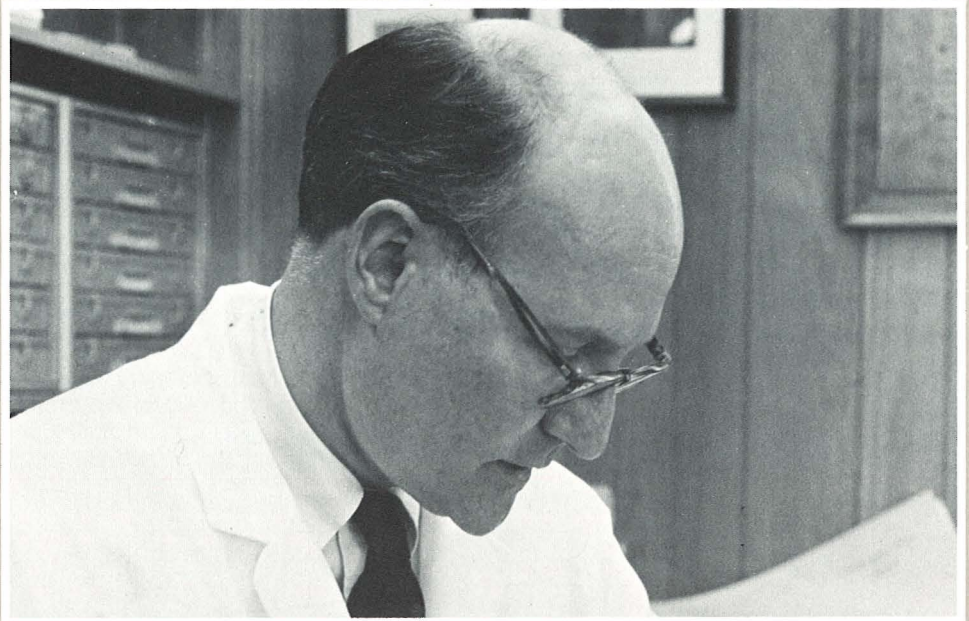
The culprit is prolactin, one of the hormones secreted by the pituitary gland which stimulates the mammary glands to lactate, or produce milk. When a nest of prolactin-secreting pituitary cells develop into a tumor, it can interfere with the pituitary's production of other hormones, including those which stimulate the ovaries and testes. The continued production of prolactin prevents the pituitary from making hormones that are needed to stimulate the ovaries to produce an egg and the testes to produce sperm.

The presence of such tumors has

been diagnosed only since 1971 when three Canadian researchers announced a sophisticated new technique, radioimmunoassay, to measure human prolactin. Since the tumors don't often result in serious symptoms and are an effective "natural" form of birth control, some patients decide against having them removed.

But for the person who desires to have children, surgeons using the operating microscope and special lighting techniques can remove these tiny tumors without disturbing the brain or destroying healthy pituitary tissue, says Dr. Kemp Clark, chairman of Neurosurgery.

Three out of the first 10 women who had their tumors removed here have become pregnant "spontaneously," that is, without the use of ovulation-inducing drugs.



Dr. Clark: New cause for infertility found.

Parkland Liaison

Dr. Charles B. Mullins of the medical school faculty stepped into a newly-created liaison post between Southwestern Medical School and Parkland Memorial Hospital in December. The move was seen as an unprecedented step to strengthen the relationship of the two institutions.

As associate dean of Southwestern for clinical affairs at Parkland and director of medical affairs at the hospital, Dr. Mullins divides

his time between offices in the hospital and the school, concentrating on coordinating programs and problem-solving activities. The new position was created in an effort by the two institutions to smooth relations and ensure the highest possible level of care for patients in the 900-bed hospital operated by the Dallas County Hospital District.

A 1958 Southwestern graduate and former chief medicine resident at Parkland, Dr. Mullins joined the faculty in 1966.

Blood Pool Imaging

An important new medical technique that uses a radioactive tracer to light up the bloodstream is being utilized at the medical school to predict the "quality of life" for survivors of heart attacks.

The technique is called dynamic blood pool imaging and involves injecting a chemical compound that tags red blood cells with a small amount of radioactivity as they circulate in the bloodstream. With the bloodstream thus illuminated with the radioactive compound, a "gamma camera" allows scientists to see chambers of the heart pumping blood, and helps to determine the impact of a myocardial infarct on the heart's performance.

The new technique, which allows the scientist to see if a section of the heart wall is not working correctly, has several other advan-

tages. It can be performed on extremely ill patients as frequently as necessary as a way to keep track of the patient's progress during recovery, and because the radioactive "label" remains in the bloodstream for several hours, a number of tests can be conducted including exercise stress tests and tests of effectiveness of various drugs. The stress test allows the doctor to pinpoint the exact amount of exercise a heart attack patient can get, and should aid in predicting what the patient's quality of life will be.

The dynamic blood pool imaging technique is one of a number of significant advances in nuclear cardiology made by Dr. Frederick Bonte, Dr. James Willerson, Dr. Robert Parkey and Dr. Max Buja of the medical school.

Radiology Chairman

Dr. Robert B. Parkey was named Chairman of the Department of Radiology Aug. 1 replacing Dr. Robert N. Berk who resigned to accept a position at the University of California at San Diego.

Dr. Parkey, an internationally recognized researcher in nuclear cardiology received his M.D. degree from Southwestern in 1965. He worked with Southwestern Dean Frederick Bonte and Dr. James Willerson, professor of internal medicine, in conceiving and developing the technique of Technetium 99m Stannous Pyrophosphate imaging to detect acute myocardial infarction. This technique is used all over the world to diagnose, localize and, more recently, to size acute heart attacks.

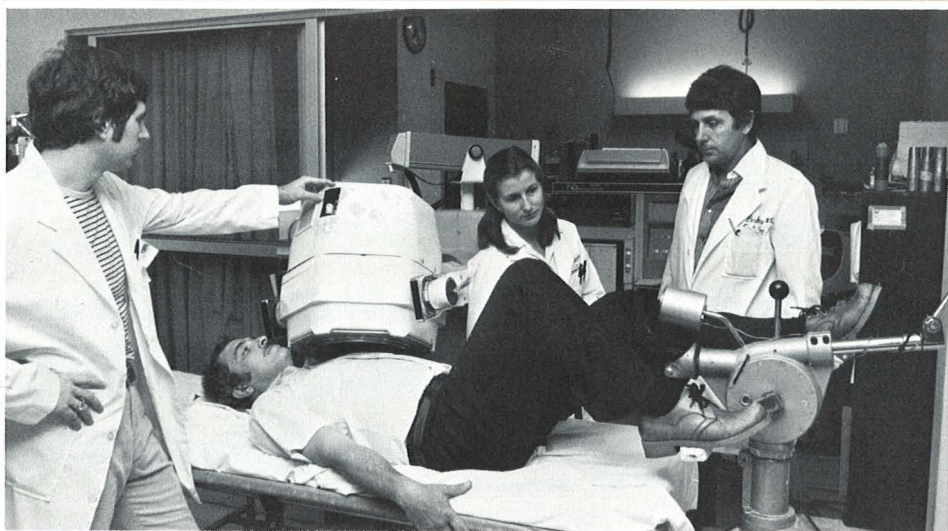
Before assuming his new duties, Dr. Parkey was acting chairman of radiology with the resignation of Dr. Berk, and prior to that, had been associate professor of radiology and chief of nuclear medicine since 1974.

AMA President

Dr. Tom E. Nesbitt, an outspoken opponent of federally regulated national health care insurance plans, will become the first Southwestern Medical School graduate to head the American Medical Association (AMA) when he assumes office in June.

A 1948 graduate, Dr. Nesbitt was elected president-elect of the AMA at their annual convention in San Francisco last summer.

Dr. Nesbitt



Dr. Parkey (right) supervises nuclear cardiology technique.

Cold and Elderly

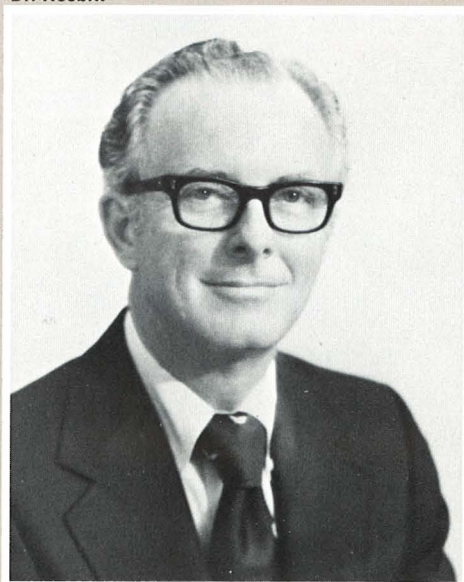
Dr. James Lipton, associate professor of physiology and neurology here, warns that winter weather is especially hazardous for the elderly. This is so, Dr. Lipton explains, because aging seems to decrease the sensitivity of the body's "thermostat."

Dr. Lipton, who has been researching temperature regulation in animals and man for more than 10 years, says that if the elderly fail to make allowances for their lowered sensitivity, they put themselves in jeopardy and the result may be accidental hypothermia—a potentially fatal drop in the deep body or "core" temperature.

Green Gift

Philanthropists Cecil and Ida Green pledged \$3.4 million to develop further a major center for human reproductive biology at the health science center. The gift, one of the largest ever made to the center, included the proviso that the UT System add \$600,000 more by 1980 to make the fund total \$4 million.

Their latest gift, deliverable in 10 annual installments from 1978 through 1987, along with the System pledge, brings to \$5 million the funds available for support of the various activities of the Cecil H. and Ida Green Center for Reproductive Biology Sciences.



Jenkins Professorship

A newly endowed professorship at Southwestern bears the name of the school's distinguished chairman of anesthesiology, Dr. M. T. Jenkins. Dr. Jenkins, who has headed that department since 1951, is widely recognized as one of the most noted academicians in his field, and has held the Margaret Milam McDermott Chair in Anesthesiology since its establishment in 1966.

The M. T. (Pepper) Jenkins Professorship in Anesthesiology is the result of a \$100,000 gift from the Eugene McDermott Foundation.

Wheeler Named VP

Jack D. Wheeler, former executive assistant to the president, was appointed vice president for administration of the health science center Sept. 1.

In his new capacity, Wheeler is responsible for the operations of the Library, the Department of Biomedical Communications, Animal Resources Center, and the Computer Resources Center, as well as continuing to be primary liaison officer to various local, state and federal agencies.

Orthopedic Surgery

Dr. Vert Mooney has assumed the post of chairman of the Division of Orthopedic Surgery. A graduate of Columbia University's College of Physicians and Surgeons, Dr. Mooney came to Dallas from Downey, Calif., where he was associate clinical professor of orthopedic surgery at University of Southern California.

In addition to his private orthopedic practice, he also served as chief of both the Amputation and Problem Fracture Service and the Problem Back Treatment Center at Rancho Los Amigos Hospital in Downey. He also served as chief of the amputee clinic at Orthopedic Hospital in Los Angeles.

Roberts Promoted

Dr. Albert D. Roberts, previously associate dean for clinical affairs, has been promoted to broader academic responsibilities as associate dean of Southwestern. Dr. Roberts continues to handle critical relations with the teaching hospitals other than Parkland.

A Southwestern alumnus, class

of 1954, he joined the school faculty and administration in 1975 after 15 years in private practice of internal medicine and nephrology. He is a former NIH fellow in metabolism and now serves as governor of the North Texas chapter of the American College of Physicians.

Astronaut Alumnus

Dr. Norman Thagard, one of last year's graduates from the medical school, has been named to the astronaut training program for the space shuttle.

One of three M.D.'s among the 35 trainees named in January, Dr. Thagard is interning at Medical University of South Carolina in Charleston. He will complete a year of internship and report to the Lyndon B. Johnson Space Center in Houston July 1.

San Antonio Chief

Dr. Katherine Rodgers, Southwestern class of '59, is the newly appointed chief of staff at Santa Rosa Medical Center in San Antonio. Dr. Rodgers, a pediatrician, helped develop and direct the Neonatal Intensive Care Nursery at Santa Rosa.

Pancreas Transplant

Medical school researchers remain confident that the problems of pancreas transplantation can be surmounted, despite the fact that their first transplant died of complications seemingly not related to the rare operation.

A 22-year-old male juvenile diabetic, Dennis Hammer, was the transplant recipient in the Oct. 5 operation which utilized a technique developed by Richard Dickerman, assistant professor of

surgery. But Hammer, already in extremely poor health, developed an unrelated problem of blood supply to the bowel, and died following a second operation to correct that problem. Hammer had been the recipient of a transplanted kidney in 1975 and had been maintained on some immunosuppressant drugs since that time.

The doctors reported that immediately following the pancreas transplant, Hammer's blood sugar dropped to normal within 15 minutes, and was still normal several days later when the blood circulation problem was corrected.

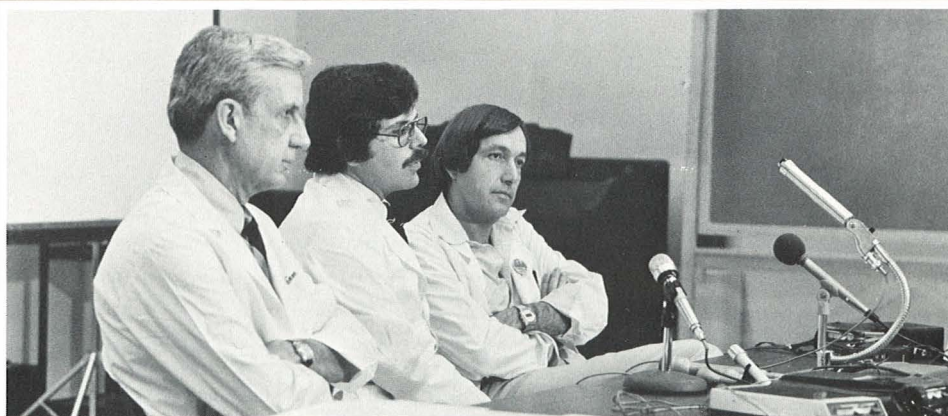
Dr. William Fry, Chairman of the Department of Surgery, assisted in the transplant. Dr. Philip Raskin, assistant professor of internal medicine, provided management of diabetic and endocrine problems.

Shaw's Retirement

Dr. Robert Shaw, whose career in medicine spanned more than four decades, retired last fall from active clinical operating duties in thoracic surgery.

Dr. Shaw came to Dallas in 1938 and was the first surgeon in the area to specialize in thoracic surgery. He was a member of the clinical faculty of Southwestern from 1946 to 1961, and was chief of the thoracic surgery section at Baylor from 1948 to 1961. In 1961, he went to Kabul, Afghanistan, as head of a medical team that set up a hospital in that area. He returned several times at the invitation of the Afghanistani government to continue training surgeons. He was a professor of surgery at the health science center from 1971 until his retirement, when he was named professor emeritus.

Pancreas transplant team: Drs. Fry, Dickerman and Raskin



Seldin's 25th

Dr. Donald W. Seldin, who has been termed an intellectual and spiritual leader in the rise of Southwestern to preeminent national status, was honored with a reunion and celebration Sept. 29 – Oct. 1, marking his 25th year as chairman of the Department of Internal Medicine.

More than 60 speakers participated in a three-day symposium, "Current Topics in Internal Medicine," held in Dr. Seldin's honor. The celebration also in-

cluded a banquet and dance each evening.

President Charles Sprague commended Dr. Seldin, William Buchanan Professor of Internal Medicine, as instrumental in the medical school's accretion of an outstanding faculty.

More than 250 former house staff members, formal renal fellows and former and present full-time and clinical faculty members attended the anniversary events.



Dr. Seldin: "intellectual and spiritual leader of Southwestern"

Family Practice

Dr. James D. Fogleman, SMS '52, has assumed the task of developing and directing a family practice residency, jointly supported by the medical school and St. Paul Hospital.

Dr. Fogleman came here Jan. 1 from The University of Texas Health Science Center at San Antonio where he served as assistant professor of family practice. He was in private practice in Dallas for 21 years before becoming involved in academic medicine.

Alumni

The Southwestern Medical School Alumni Association began this year to hold its annual meetings in conjunction with the Texas Medical Association meetings. At the San Antonio meeting May 11 Dr. Arthur Grollman, professor emeritus of internal medicine, was made an honorary alumnus

of Southwestern.

An in-depth story about Southwestern alumni will be forthcoming in a future issue of **Health Science Spectrum**. The Office of Medical Information welcomes news of professional accomplishments and community involvement for possible inclusion.

Otolaryngology

Dr. Mark M. Altenau, new acting chairman of the Division of Otolaryngology and assistant professor of surgery, came to the health science center from private practice in Atlanta. A graduate of the University of Cincinnati and its medical school, Dr. Altenau did his internship and part of his residency at Presbyterian St. Luke's Hospital in Cincinnati, as well as residency service at Vanderbilt and at the UT Medical Branch at Galveston.

AMA Trustee

Dr. C. Max Cole, clinical professor of surgery, was elected to the Board of Trustees of the AMA to fill out the unexpired term of the late Dr. Joe Nelson who was also a University of Texas regent. Dr. Cole, chief of surgery at Presbyterian Hospital of Dallas, has been a delegate to the AMA since 1967 and has served as chairman of the Texas delegation since 1974.

Rheumatoid Arthritis

More than two million Americans have rheumatoid arthritis; more than 200,000 of them are children. The cause of this crippling disease remains a mystery.

But recently Dr. Peter Stastny, associate professor of internal medicine, discovered that victims of rheumatoid arthritis have a certain genetically determined immunological makeup – in other words, an inborn predisposition to develop the disease.

There always has been "an undercurrent of suspicion" that a genetic factor is involved in rheumatoid arthritis, but until now the evidence seemed to be against it, Dr. Stastny said. "From this study we can say for sure that there is evidence of a genetic factor in rheumatoid arthritis."

What Dr. Stastny found was that certain "genetic markers" (molecules on the surface membrane of the body's cells) occur in a significantly higher percentage of those with RA, as compared to those without the disease. The presence of these markers is determined by an area on a particular chromosome known as the "HLA region," which has a great deal of control over the human immune response.

He said it was not surprising to find an association between the chromosome which codes for the immune response and a disease such as rheumatoid arthritis "because in RA there are all kinds of funny things going on that involve immunity."

The discovery opens up new possibilities for performing experiments which presumably will help unravel the development of the disease – how and why it appears in certain people, Dr. Stastny said.

-Compiled by Susan Wilson

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