

Vanderbilt Medicine

FALL 2002

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Dr. Mildred T. Stahlman, professor of Pediatrics, is congratulated by Dr. John Chapman and Judy Jean Chapman after receiving the Distinguished Alumna award during Medical Alumni Reunion.

REUNION



From left, Dean Steven Gabbe, Dr. Mildred Stahlman, Dr. Alan Rosenthal, Nelson Andrews, Monroe Carell Jr. and Dr. Harry Jacobson at Medical Alumni Reunion. Stahlman and Rosenthal received the 2002 Distinguished Alumni Awards. Andrews and Carell received the Distinguished Service Awards.

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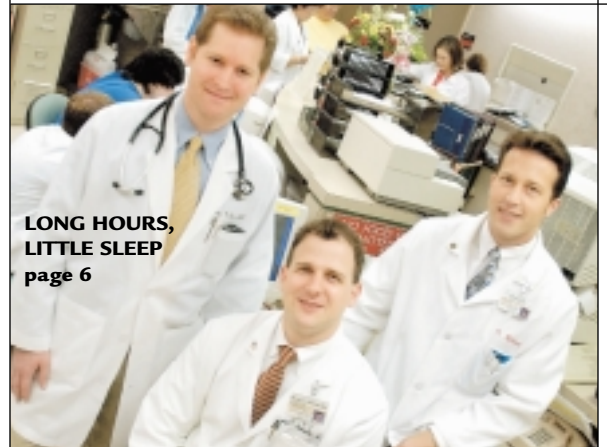
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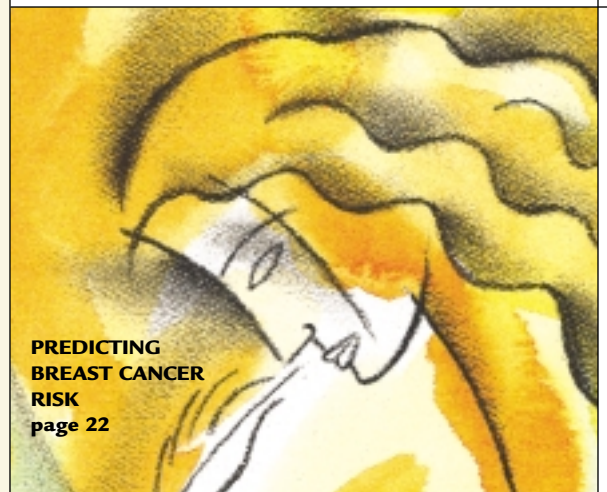
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America's residency program at a crossroads

The path from the first day of Medical School to medical licensing takes every doctor through a formal apprenticeship known in medicine as the residency. I remember my first day as an intern at Johns Hopkins in Baltimore. It was a program steeped in tradition and one with very high expectations of its interns and residents. I was on call my first day, admitted six very ill patients and didn't make it home for two days. We had a long/short off call system with three interns and two residents working as a team. The residents were on call every other day. I worked very hard but I also feel that this experience made me what I am today. But I always felt supported by my more senior residents and by the faculty. I never felt used or taken advantage of.

I spoke to the entering group of house staff this summer. I told them, "You are about to embark on the second part of your mastery of medicine. Now the real doctoring begins. The opportunity to help is exhilarating – the responsibility to help weighs heavily. Your residency training will be intense; it will challenge your intellect, your emotional reserves and your stamina. You'll confirm something, which I know you already appreciate, that patients are much more than the sum of their organs and fluids and molecules. You will find that they are vastly more complicated... more maddening sometimes... and also more rewarding and more fulfilling than you can now imagine."

"Contrary to popular myth tonight

will not be the last full night of sleep that you get for the next four years. The Chief Resident is not named Legree and your husbands, wives and families need not be admitted onto your service to see you. Residency is hard and it is demanding but it need not be demeaning. At its best it is a noble pursuit with you as the seeker and us as your guide. I have watched with disbelief and sadness as institutions and their residents have become adversaries. I can think of no poorer fate than to be the head of such an institution or a resident there or maybe worst of all to be a patient there."

The residency program in America is at a crossroads. The process of medical education from top to bottom needs to be reinvigorated. Our profession once attracted the best and brightest. An alarming trend began a decade ago when applications for medical schools took a precipitous drop and the trend continues. Often now law and business are attracting the brightest. Much of it is a function of return on investment – law and business students, especially the best among them, spend one quarter of the time in postgraduate education as doctors. They leave their degree programs and are often able to earn salaries at least comparable to those earned by doctors when they enter practice.

But some of the lost appeal of a degree in medicine to these very gifted young people may be the perception of draconian treatment in their residency apprenticeship. Many physicians of my generation remember the crucible of their "boot

camp" residency with a nostalgia approaching reverence. It is a reverence that cannot blind us to the need to improve, to change.

At Vanderbilt we are committed to making residency the best educational experience possible – one that challenges but does not abuse, one dedicated to education – not one bound by narrow rules based on bureaucracy. We, and I know, you, want our doctors to have the best training possible. This cannot be done in an 8 to 5, five day a week setting. The mythic (and autocratic) characters of the past like Barney Brooks and Bill Scott are replaced by equally mythic (but more compassionate) residency leaders like John Tarpley and John Leonard, both recognized by the Association of American Medical Colleges as masters in the art of residency training.

In the next months and years, the national discussion of residency rules will work themselves out in the give and take of adversarial compromise. At Vanderbilt, we will balance the need for rigorous training with concern for the safety of our patients. We will balance the need for continuity with patients and the need for family time even for residents. We will devise a plan and an approach that meets ACGME standards; that meets our trainees' need for the best education they can have; that respects the humanity and dignity of each resident; and that emphasizes the best of Vanderbilt – excellence, collegiality and compassion. ♡



DEAN DIXON

BY HARRY R. JACOBSON, M.D.
Vice Chancellor for Health Affairs

Next time you donate, drink water



Chances are, if you donate blood often, you've seen them: blood donors who pass out before making it to the table filled with Little Debbie snack cakes.

After all, blood donors have 8 percent to 10 percent of their blood volume removed. Most people adapt quickly to this loss, but about 150,000 people a year adapt less well and consequently faint.

A team of Vanderbilt University Medical Center researchers has found that healthy people, who sometimes experience episodes of fainting after excitement or exertion, may be able to prevent fainting episodes simply by consuming 16 ounces of water prior to activities that often precipitate fainting, such as donating blood.

Dr. David Robertson, Elton Yates Professor of Medicine, Pharmacology and Neurology, and director of the Vanderbilt Clinical Research Center, and Dr. James Chih-Cherng Lu, a visiting scientist from Taipei, presented VUMC's findings recently in Orlando at the American Heart Association's 56th Annual High Blood Pressure Research Conference.

Robertson's group at VUMC, and a team of German researchers led by Drs. Jens Jordan and Christoph Schroeder of Humboldt University in Berlin were each seeking to answer the same question. Each team conducted similar trials that led to the same results.

Both groups studied healthy people without a history of fainting to follow up earlier research performed at VUMC. That research found that drinking water reduced the likeli-

hood of fainting in people with malfunctioning autonomic nervous systems.

Both teams conducted their studies using tilt-table testing. In a tilt test, the participant lies on a bed-like table that can raise and lower at varying speeds, and can stop at varying degrees of tilt. Both teams tested subjects at a 60-degree angle, slightly more than halfway between lying flat and standing upright.

"Many people can't stay at that angle for more than 45 minutes before passing out," Robertson said.

On the first round of testing, one of the randomized groups drank water and the other didn't. On the second round, the two groups switched, with the water drinkers going without and the nondrinkers consuming water. The tests were performed on different days.

VUMC researchers provided their research subjects 16 ounces of water five minutes prior to the tilt test. Ten of the 22 subjects had slow heartbeats and/or a significant drop in blood pressure when tilt-tested for up to 45 minutes without consuming water. Only one person who drank water nearly fainted. Drinking water increased the time that test participants could tolerate remaining at a 60-degree angle to an average of 40.9 minutes, vs. 33 minutes without water. Those who drank water had a smaller decrease in heart rate associated with tilting than those who didn't drink.

Schroeder's group had nine women and five men drink 16 ounces of mineral water 15 minutes before being tilt-tested. The German team found that drinking water increased the time before participants nearly fainted by an average of five minutes, compared to when they were tested without consuming water. The researchers also found that drinking water tended to lower the heart rate while lying down, and improve the force and flow of blood in the body both when horizontal and upright.

Robertson says the VUMC study shows that the mechanism of water's effect is not simply a matter of increasing the volume of blood, but probably involves molecular mechanisms eliciting nervous system excitement.

"People who know that certain circumstances cause them to faint should drink water before periods of vulnerability," Robertson said. V

A selfless career

Vanderbilt University can thank Dr. David H. James Jr. for its only undefeated football season since 1922. Granted it wasn't all his doing; he played guard. Granted the team played only five games, against such powerhouse teams as Milligan and Carson-Newman. Granted it was 1943, and athletic activity was curtailed because of World War II.

But what he has achieved in his career will long be ranked high above what he did on the football field.

Thousands of families can thank James, MD'51, for bringing high-quality pediatric medical care to a low-income Memphis neighborhood. Scores of employees and medical students, including two sons who also became physicians, recall lessons learned at the Children and Youth Project clinic, which he directed for more than two decades.

"The clinic was unique. It was like an extended family," said Beverly Cox, a nurse who worked at the clinic for 11 years. "And it provided magnificent health care. The children there received as good or better health care than children who lived in affluent areas of the city."

The close-knit staff worked well together, she said, handling large patient loads. "We had days that were just horrendous. At the end of the day you were dead on your feet, but you felt good because you made a difference in someone's life."

David James' interest in working with children was sparked when he was required to work with Dr. Amos Christie the summer following his third year of medical

school. The pairing was one that would ultimately lead to the improvement of health care for many needy children in Memphis.

"The pediatric department was very impressive. There were good role models there. By the time I graduated from medical school, I knew that was what I wanted to do," James said.

Following a residency at St. Louis Children's Hospital in St. Louis, Mo., he moved to West Memphis, Ark., which is still his home, and went into private practice. In 1962, he joined the staff of the fledgling St. Jude Children's Research Hospital in Memphis, where he participated in research on treatments for childhood leukemia and malignant solid tumors. Five years later, he became director of pediatric training at St. Joseph Hospital in Memphis. There he learned of a federal program to provide comprehensive health services to children in low-income areas.

"It looked like a natural," said James, in his unhurried, Southern manner. "The area around St. Joseph was low-income. I knew the children there weren't getting proper

health care."

With the help of St. Joseph and the local health department, he submitted a grant proposal. Then he walked the neighborhood, meeting with physicians, health care agencies and community organizations. The original grant documents include many letters written in support of the project. One from an ophthalmologist shows a fee schedule for his services: \$5 for an office visit, \$15 for a full exam. A letter from a realtor indicates clinic space could be rented for \$3.50 per square foot. The grant was approved, and in January of 1967, James opened the Children and Youth Project in a public housing development. The area served by the clinic was largely black and very poor, and it was a time of racial unrest. The next year, Dr. Martin Luther King Jr. would be shot during his visit to Memphis in support of the sanitation worker strike. In fact, the civil rights leader would be pronounced dead at St. Joseph Hospital.

Yet Dr. Virginia Gaylon, who worked at the clinic from 1968 to 1991, said she felt no racial tension. "The residents were very happy to have a clinic in their neighborhood," she said. "All of our workers were hired from the community, and many

by Elizabeth Rahe

stayed with us until our clinic closed. That's pretty remarkable. Many took college courses and improved themselves."

One of the racial issues of the late '60s, a hospital worker strike, precipitated a positive development for the clinic. Medical students and residents from University of Tennessee Memphis, who could not work in the city hospital, began rotating through the Children and Youth Project. The program helped staff the clinic and gave the students the rare experience of working in an inner-city community setting. It also signaled a stronger affiliation with UT, where James was an associate professor.

The greatest hurdle the clinic faced was in 1981, when a change in the distribution of federal grant money resulted in a drastic funding cut.

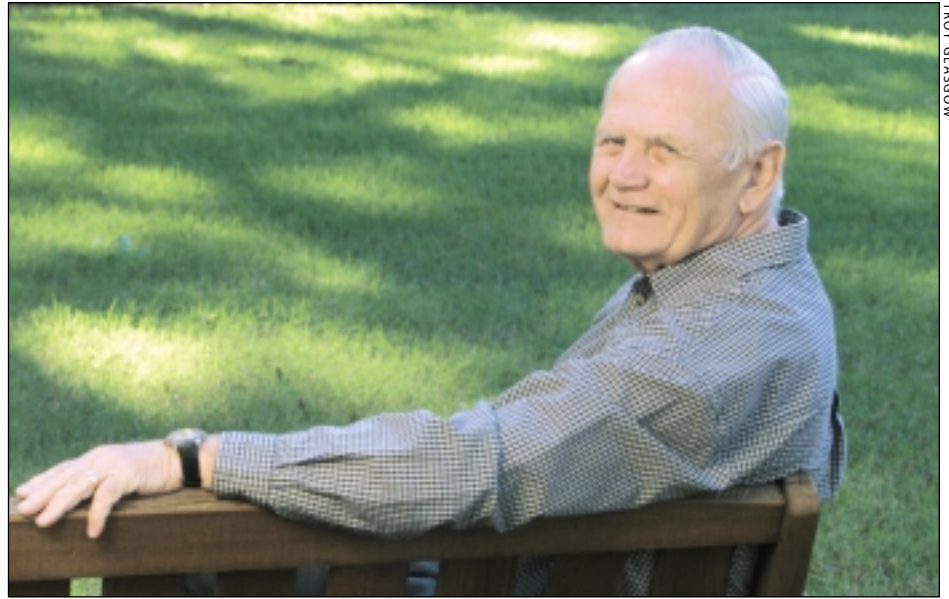
"That was a crisis," James said. "I didn't know whether we'd be able to survive or not."

James scrambled to piece together funding from public and private sources, taking advantage of Medicaid and getting small grants, as well as help from the community. He knew the landscape well from his days canvassing the neighborhood and from his own family legacy. His father and uncle – both VUSM graduates – had practiced in the same office in downtown Memphis for 56 years.

Despite his efforts, there were some cutbacks. "At one time, the staff had to go half-schedule, half-pay," Gaylon said. "Dr. James led us through it all. He was committed to health care for the poor, and he continued that theme throughout his career."

He also was committed to health education, which he believed would reduce the need for hospitalizations. Many children in the area were affected by preventable illness, such as anemia and lead poisoning. Physicians and health care workers taught mothers about the importance of immunization, proper nutrition and infant care.

Their focus on education resulted in a marked decrease in hospital admissions,



TROY GLASGOW

DR. DAVID JAMES JR.

from 178 the first year of operation to 80 the third year. During the same period, patient visits increased from 2,000 to 3,500. In 1986, of 14,000 patient visits, there were only 54 hospitalizations.

until 1997.

These days, James and Ann, his wife of 48 years, take time to visit their large family, which includes 11 children, ages 26-46

“David is one of the nicest people and an astute diagnostician. He cares about everybody – patients, staff, physicians. It’s unusual to find a person like that.”

– Dr. Judy Wood

“It was what every physician and patient dreams of,” said Dr. Judy Wood, associate professor of pediatrics at University of Tennessee Memphis, who worked at the clinic in the early '80s. “Patients could walk to the clinic, and people knew them. I think Dr. James knew the name of every person who came in there. David is one of the world’s nicest people and an astute diagnostician. He cares about everybody — patients, staff, physicians. It’s unusual to find a person like that.”

Beginning in 1990, the clinic gradually became part of a county comprehensive health program for low-income patients. James retired from the university in 1993, and worked part-time in private practice

and 12 grandchildren. They travel some and have season tickets to the Memphis Redbirds baseball team – James threw out the first pitch at a game July 5. He and Ann volunteer at their church, deliver for Meals on Wheels and visit homebound friends.

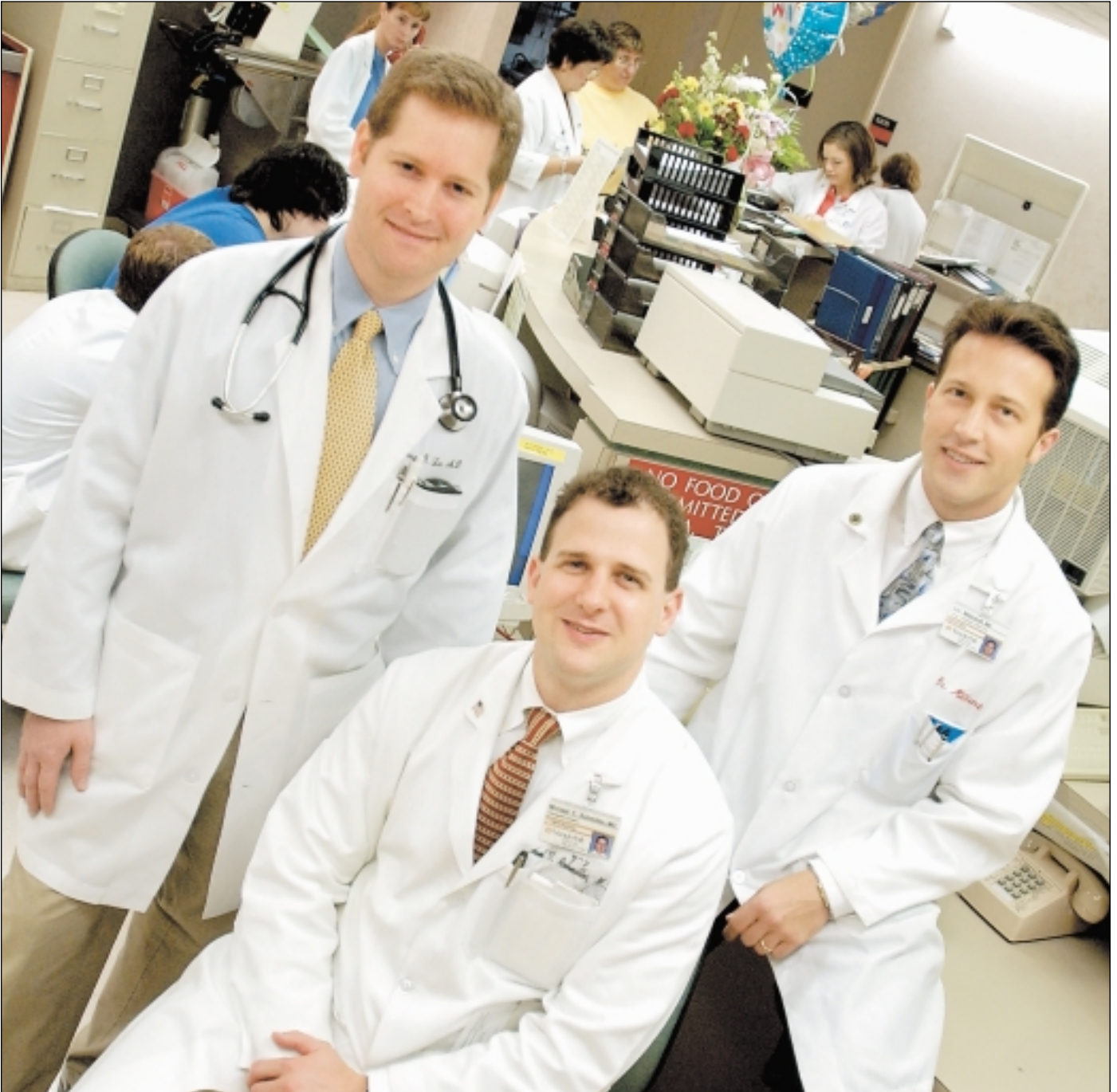
His work has earned him many honors, including the Community Service Award in Medicine from the National Conference of Christians and Jews and the Outstanding Pediatric Clinical Teaching Award from the University of Tennessee.

Despite his accomplishments and accolades, his philosophy about service remains simple and selfless. He said of his work with the Children and Youth Project, “I knew that if we didn’t do it, no one was going to do it.”

ling h



DANA JOHNSON



From left, resident physicians George Lee, Michael Rohmiller and Eric Milbrandt on the 11th floor of Vanderbilt University Hospital.

OWNERS little sleep

by Nancy Humphrey

During her internship at Massachusetts General Hospital Dr. Rose Robertson fell asleep while taking a patient's history. In the seconds between her question and the patient's answer she nodded off.

When she awoke, the patient was quietly waiting for the next question. Another time, Robertson ended a long shift and stopped by the grocery on her way home. As she sat in her car in the parking lot, she leaned her head back to rest her eyes. She woke up three hours later.

At Massachusetts General, Robertson usually worked an every other night call system. She'd work 36 hours, and then be off for 12.

"I guess everyone who walked by my car that day at the grocery wondered what was wrong with me. Maybe they saw my white coat and understood," Robertson said.

Long hours. Little sleep. It's part of being a doctor in training. For years, interns and residents, recent graduates of the nation's 125 medical schools, have been expected to both learn and provide quality care for their patients while they are tired and overworked. It's a debate that is receiving renewed attention under the proposed standards from the Accreditation Council for Graduate Medical Education (ACGME). The standards have called attention to the fact that the long hours that residents are required to work may jeopardize both resident health and patient safety. In June 2002 the ACGME granted preliminary approval to new duty-hour standards for residency programs in all specialties. The ACGME accredits 7,800 U.S. residency programs in 118 specialties and subspecialties. It establishes educational requirements and assesses compliance with them through its accreditation process.

In the early 1980s, the ACGME began

to address resident work hours.

There were several developments that spurred the closer look, including a 1984 lawsuit by Sidney Zion, an attorney and writer for *The New York Times*, against New York Hospital for medical malpractice for the alleged wrongful death of his 18-year-old daughter, Libby. He argued that Libby's death was caused in part by tired resident physicians who had inadequate supervision from superiors. The grand jury found neither the hospital nor the physicians at fault, but it did find faults with the system of medical training under which Libby Zion's death occurred. Residents were routinely working more than 100 hours a week. Second- and third-year residents were supervising entire wards and services, attending-level physicians were only available by telephone and residents were providing patient care continuously for 30- to 40- hour periods. The grand jury found New York's method of training doctors – a method used across the country – as "counterproductive to providing quality medical care."

In 1989 recommendations from the jury's report became part of New York State Health Code. The recommendations included the following: a resident's work-week should be limited to 80 hours, averaged over a four-week period; residents

should not be scheduled to work shifts exceeding 24 consecutive hours; residents should have at least one scheduled 24-hour period of non-working time per week.

The New York recommendations led to the current ACGME work group standards, which are expected to take effect in July 2003.

- Residents should not be scheduled for more than 80 hours a week, averaged over a four-week period, with the provision that individual programs may apply to their institution's Graduate Medical Education Committee for an increase in this limit of up to 10 percent, if they can provide a sound educational rationale.
- One day in seven should be free of patient care responsibilities, averaged over a four-week period.
- In-house call should occur no more frequently than every third night, averaged over a four-week period.
- There should be a 24-hour limit on in-house call duty, with an added period of up to six hours for inpatient and outpatient continuity and transfer of care, educational debriefing and didactic activities. No new patients can be accepted after 24 hours.
- A 10-hour minimum rest period should

be provided between duty periods.

- When residents take call from home, and are called into the hospital, the time spent in the hospital must be counted toward the weekly duty hour limit.

The standards are being met with mixed reviews at VUMC.

Dr. Fred Kirchner Jr., associate dean for Graduate Medical Education, said Vanderbilt has been concerned with resident working hours for some time. There are more than 700 residents and clinical fellows and 60 accredited programs at Vanderbilt. Up until now, every specialty has had its own guidelines.

"We as an institution take the issue seriously. We have for a number of years monitored the issue through self reporting," Kirchner said. "About a year ago we came up with a website and asked residents in certain rotations to keep track of their hours for a month. We're monitoring the residents through our office. It's selective and fairly labor intensive, but we're doing it."

But in a letter to the ACGME, Kirchner said the guidelines don't "reflect the reality of the practice of medicine."

"Every day of practice, and yes, training, has innumerable unexpected variables. A part of professionalism is quickly adapting to the ebb and flow of the day, with patients' needs foremost. I am fearful our future physicians will have a 'shift mentality.' Although the ACGME places roughly equal emphasis on 'duty hours' and 'supervision,' I suggest the balance should be tipped to the latter. There shouldn't ever be

Dr. Jennifer Herrell works with Dr. Alastair J. J. Wood during rounds in the Medical Intensive Care Unit.



any tired 'lone rangers.' Appropriate supervision, including recognition of fatigue should be the emphasis, not rigid duty hours. As a number of our residents said at our institution's last House Staff Advisory Council meeting, 'I didn't go into medicine and expect to punch a time clock.'"

Kirchner said medicine is not the sort of profession that lends itself well to rigid scheduling.

"The medical degree is the halfway point. Residents are really students who are paid and who are legally employed. Part of our job is to help them learn how to be good doctors," Kirchner said. "Patients just

"You have to balance someone becoming too fatigued with benefits obtained from one doctor taking care of the patient from start to finish." - Dr. Addison May

don't get sick by the clock. The ACGME is preaching professionalism but part of professionalism is learning how to roll with the punches. Rarely are physicians' days predictable. But I will acknowledge that the ACGME has tried to build in flexibility."

"The New York state legislation is very rigid," Kirchner said. "If you read the legislation very carefully, there's no time to disseminate information between shifts. If someone needs to go home at 24 hours, if the next group comes in at their 23rd hour, to trade information about patients, this group has started an hour earlier than the previous group. Then the next group comes an hour earlier, and within a few days, you have people coming in at 3 in the morning, if you do what the law proposes."

The ACGME guidelines, however, require 24-hour shifts, but indicate that institutions can extend those six more hours as long as the resident is not assuming new patient care responsibilities.

In 1969 when Dr. Steven G. Gabbe, dean of Vanderbilt University School of Medicine, was an obstetrics/gynecology intern at New York Hospital, he worked every other night and every other weekend for a full year. On the average, he would work well over 100 hours a week. Once, he fell asleep face-first into a plate of food. Another time, he dozed off while listening

to the soothing sound of a patient's heart.

"One of my fellow residents went home on the Wednesday before Thanksgiving and was going to have Thanksgiving dinner with his family that evening," Gabbe said. "But when he got home, he sat down on the bed to change his shoes and the next thing he knew, it was Thursday."

Gabbe said he is concerned that the new guidelines may hamper continuity of care.

"On labor and delivery, you may follow a patient all night and she might be ready to deliver at noon the next day, but if your hours are up, you have to go home. I think that would be unfortunate because

you would lose continuity with that patient," Gabbe said. "I think there needs to be greater flexibility allowed by the faculty overseeing the service, to say to the resident, 'here's a patient with a problem you haven't seen before. Would you like to admit this new patient?'"

Dr. Addison K. May, associate professor of Surgery and the program director for the surgical trauma/critical care program for residents, agrees.

"You have to balance someone becoming too fatigued with benefits obtained from one doctor taking care of the patient from start to finish. The more you remove the physician from the responsibility of the patient, from start to finish, the more difficult it is to learn what you need to learn."

May said the residency working hours issue is "complex."

"The issue is very difficult to comprehend from outside the system," said May, who was a resident at the University of Virginia. "It's a leap of faith to assume that by decreasing residency hours, patient care will be improved. I think as a profession, and as educators, we should do everything in our power to make our education the best it can be and to limit the hours needed to get appropriate training."

Whether fewer working hours for residents will actually improve patient safety

has not been proven, May said.

“But it is the right thing to do to educate people in the most humane fashion possible. I think we need to take the steps while maintaining quality patient care in a more time efficient manner.”

May said he believes it would be difficult to teach physicians, especially surgeons, the same amount of knowledge in less time.

“I do not believe that if my work hours in my residency were limited, my education would have been any better.”

Dr. George Lee, in his third year of a neurology residency at Vanderbilt, said he isn't sure how the group came up with 80 hours.

“Should it be 80? What's the magic number? Less? More? That's something that has to be fleshed out over the next several years, but it should be something that suits the learning and patient care environments in each specialty,” Lee said. “Each specialty is different. Surgical residents may find it tough to work under those time constraints. In other specialties, it's not a problem.”

Lee said he has worked as many as 120 hours in a week, but averages about 60 hours now.

“When I worked 120, I felt like my judgment wasn't as good as it could have been but I didn't feel like I endangered anybody either,” Lee said. “If you did that months at a time, it could be bad, it could take its toll, but if you just have isolated weeks of 120 hours, it's not too bad. It's also an individual thing. Some people can work longer hours with less stress than others.”

Dr. John H. Newman, Elsa S. Hanigan Professor of Pulmonary Medicine and chief of Medicine at the Veteran's Administration Medical Center, said he believes work hours have decreased progressively with each generation of residents. He was an intern at Columbia beginning in 1971, then a resident at Johns Hopkins.

“There's always been a fear if the young doctors aren't here, working, they won't learn medicine,” Newman said. “Clearly we've proven by reducing our working hours, that we're producing doctors of the same or better quality than we did when we were making people work so hard for so many hours. More residents today are married and have children. It's clearly much more humane to work people reasonable work weeks.”



DANA JOHNSON

Resident physicians (left to right) Jason Schragar, Eric Martin, Derek Moore, and Matt Busam check on CT scans.

Dr. Eric Milbrandt, in his fourth year of a pulmonary and critical care fellowship at Vanderbilt, has taken a national role in the residency working hours issue. He is the past vice-chair of the American Medical Association's resident and fellows section, a group composed of physicians still in training who are working with national leaders on the working hours issue.

“I think the ACGME guidelines are an excellent first step toward improving the lives of residents and the safety of patients. It's a good way to get the ball rolling,” Milbrandt said, citing evidence that driving after the 24th hour of being awake is the equivalent of driving while legally drunk.

Milbrandt said he believes the weakest section is the home call section.

“It doesn't count (toward weekly hours) unless you have to come into the hospital, but sometimes, when you're at home, you're getting paged every 15-20 minutes. So you're still sleep deprived, and sleep deprived people are therefore at risk for auto accidents, depression and even pre-term labor,” he said.

Dr. Michael Rohmiller, a fifth-year resident in orthopaedic surgery and chair of the Vanderbilt Housestaff Advisory Council, said he does not feel he's been overworked at Vanderbilt.

“It's possible that other residents may

be overworked, but Vanderbilt has been proactive in trying to prevent it from happening,” he said.

Rohmiller, whose wife is a Radiology resident at Vanderbilt, said he doesn't believe it's possible to systematically follow the proposed work hour rules in all given specialties.

“That might mean that if a surgical resident's 80 hours came up, he or she might have to leave in the middle of an operation,” Rohmiller said. “I'm worried about being limited as to what I can and can't do. When I finish with my training, is someone going to dictate how I practice, the hours I put in? One of the reasons I went into medicine in the first place is because you can practice the way you want. I'm afraid some restriction could lead to more restriction.”

Newman said if the system changes, Vanderbilt's emphasis on exceptional physician training and patient care must stay the same.

“Vanderbilt has kept its focus on having a program that is very desirable because of the quality of education and the environment. We've made changes that will keep that quality at a high level,” he said. “Some of those changes have involved lessening the work hours because that has become desirable in a residency program. Our goal is to have a great program. Reducing the hours is just part of that.”

VUMC receives \$1 million gift in honor of alumnus

DANA JOHNSON



Dr. Jack Martin

Having gifts made to Vanderbilt in his name is nothing new for Dr. Jack Martin, MD'53.

There have been several, including a scholarship named in his honor in 1989 at Vanderbilt University School of Medicine.

But this year, as Martin celebrated his 50th reunion and served as the overall Gift Chair for Reunion 2002, he was also honored with a \$1 million gift to establish the Jack Martin Research Professorship. This gift will provide support for research within the Division of Psychopharmacology, under the leadership of Dr. Herbert Y. Meltzer, professor of Psychiatry and Pharmacology, a nationally recognized expert in the treatment of schizophrenia. In addition to this recent gift, the Department of Psychiatry has received more than \$700,000 in Martin's honor to support research in the area of schizophrenia and other related disorders.

When friends asked Martin how they might recognize his good work and support efforts to find answers to the causes and treatment of schizophrenia, he suggested his alma mater and the cutting edge work of Meltzer. Two gifts, including the \$1 million gift, have come from one family who has had three members treated by Martin.

"I introduced them to Dr. Meltzer and they were intrigued by his research in psychopharmacology," Martin said.


In 1989, a grateful friend made a gift to VUMC to endow the Jack Martin Scholarship Fund.

After completing medical school, and serving as the president of the Class of '53, Martin did a rotating internship at Charity Hospital in New Orleans and then spent four years in training at Cincinnati in Child and Adult Psychiatry. In 1957 he met his wife, Ann, a recent graduate of Smith with a master's degree in Psychiatric Social Work, and the two worked together at Cincinnati General Hospital. They were married a year later. They have four children and nine grandchildren.

Soon after marrying, the couple moved to Dallas where Martin started the child psychiatry program at University of Texas, Southwestern. A few years later, he and Ann purchased a boarding school, Shady Brook, and turned it into a residential treatment center for emotionally disturbed children. They headed that home until 1981.

Martin still practices medicine, although on a "very reduced" scale, about 6 to 10 hours of outpatient therapy a week. He is currently spending time with his family and helping take care of a longtime friend who has Alzheimer's disease. The Martins also enjoy volunteer work, tennis, skiing, golf and traveling. About four years ago, Martin took up competitive bridge again and plays live bridge on the Internet with partners from all over the world. He has also played in regional tournaments and is working on obtaining enough points to achieve Life Master.

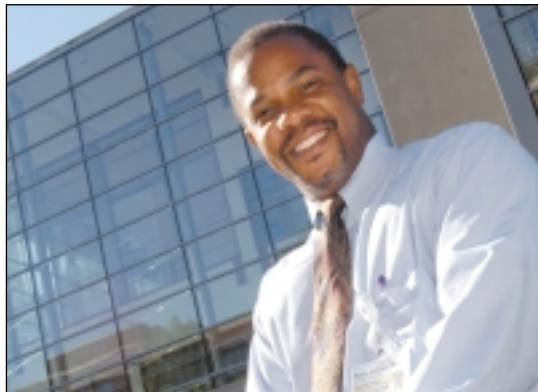
He has served on the VUSM alumni board and has repeatedly been his class chair for raising funds. "Our class has a very high percentage of givers. One year, it was mentioned that our class was the only class to ever have 100 percent participating in the giving effort," he said.

"I developed a love affair with Vanderbilt while I was there. I had a wonderful experience, a great class, and great faculty. There was a fraternal spirit about it," he said. "I continue to be very fond of Vanderbilt. Anything I can do, I will. It's very close to my heart." 



Not just for computer geeks anymore

If the new vice-chairman of Biomedical Informatics were to pick a motto for his new squad, you might start seeing T-shirts across campus emblazoned with the slogan: "Biomedical Informatics: It's not just for computer geeks anymore."



DANA JOHNSON

Dr. Kevin Johnson

Dr. Kevin Johnson, who hails from Johns Hopkins (where he was born, earned a medical degree and served as chief resident before becoming faculty), sees a bright future for the growing department. At the top of his to-do list is: publish more about Vanderbilt's efforts in the realm of biomedical informatics, making it more accessible to everyone in medicine.

"This group has done a lot to bring biomedical informatics to the forefront of health care," said Johnson, a practicing pediatrician as well as a bioinformatician, "and we are excited to be in a position to talk about our results and their implications at a national level.

"We have a critical mass of people to work on new approaches to managing information." Vanderbilt, he said, has a reputation of being a leader in the field. WizOrder, which is perhaps the most well-adopted clinician order entry environment, demonstrates creativity and responsiveness to the needs of clinicians and the vision for the way information technology systems ought to be developed," he said. "This has gone way beyond putting software together," he said. "Drs. Nancy Lorenzi, Bill Stead, and Randy Miller have assembled a whole transformational group here who focus on people and processes, as well as technology."

Johnson's reach already has extended beyond the walls of the Eskind Biomedical Library. He has begun to collaborate with Dr. Jim Jirjis, assistant professor of Medicine in the Adult Primary Care Center, Dr. Neal Patel, assistant professor of Pediatrics in Critical Care and Anesthesia, Josh Petersen, a research analyst in Molecular Physiology and Biophysics, and a host of other faculty throughout the medical campus.

"We are extremely fortunate to bring an individual with Kevin Johnson's talents to Vanderbilt," said Dr. Randolph Miller, professor and chair of Biomedical Informatics.

Johnson is finishing two projects he started at Hopkins, testing whether hand-held computers are as good as pen and paper for writing prescriptions, and developing tools that help physicians record patient encounters in a "structured reporting" system. He will soon start two others at Vanderbilt, one to look for ways of improving the use of personal digital assistants for order entry, data review and reporting, and another to find ways to improve the adaptation of technology to clinical settings.

- CLINTON COLMENARES

VUMC begins second smallpox trial

Vanderbilt University Medical Center researchers are launching a second trial of the nation's existing supply of smallpox vaccine. This study will evaluate the frozen stockpile of Aventis Pasteur smallpox vaccine, and will measure the ability of the vaccine to stimulate immunity at three different dilutions. Another component of the study will assess potential risk of those vaccinated to other "vaccine naïve" individuals.

The multi-center study, to be conducted by researchers at VUMC, the University of Iowa, and the University of Cincinnati, will address two questions: the appropriate dilution of the vaccine to stimulate immunity, and if those vaccinated pose any infectious risk to others with whom they may come into contact.

VUMC's previous smallpox vaccine study proved that both of the Centers for Disease Control and Prevention's (CDC) stockpiles of Dryvax vaccine and the frozen Aventis Pasteur vaccine would produce an appropriate immune response at differing dilutions. Both lots of the vaccine, manufactured decades ago, have been in cold storage since global eradication of the disease in the late 1970s.

"We proved in the first study that the frozen vaccine still works great, and could be diluted and remain effective," said Dr. Kathryn M. Edwards, professor of Pediatrics in the division of Pediatric Infectious Diseases and the study's principal investigator.

Edwards said of 60 participants immunized at VUMC in the previous trial there were 58 positive "takes" to the vaccine.

"The new study with a larger number of participants will focus just on the frozen Aventis Pasteur vaccine. The vaccine will be given at three strengths: full-strength, diluted 1-to-5, and diluted 1-to-10," said Edwards.

Edwards and the VUMC Vaccine Trials staff are seeking 150 volunteers, ages 18-32, who have never had the smallpox vaccine. Criteria for exclusion from the study include a history of exfoliative skin disorders such as eczema or household contact with those with eczema, prolonged contact with children under 12 months of age, pregnancy, and people with autoimmune diseases.

"For this study we would like to target first responders such as police, fire and EMS workers as participants," Edwards said. - JOHN HOWSER



CANCER

Who's at risk? Can it be prevented?

News from the front in the war on cancer has been largely exciting and promising.

Thanks to advances in research and treatment, death rates for all cancers continue to decline.

The approval of the “leukemia pill” Gleevec demonstrates that developing new targeted therapies with few if any side effects is challenging, but not a pipe dream.

And the sequencing of the human genome and the explosion in the study of proteins that carry out the genes’ instructions are producing a wide range of new opportunities to be seized in the fight against cancer.

But last spring, the “Annual Report to the Nation on the Status of Cancer” highlighted that the enemy has one distinct advantage in the face of our advances against it: the aging of the U.S. population. With a few exceptions, risk for cancer increases simply as one gets older.

And the more elderly people, the more cancer.

“If cancer rates follow current patterns, we anticipate the number of people diagnosed with cancer to double from 1.3 million people in 2000 to 2.6 million in 2050,” said Holly Howe, Ph.D., executive director of the North American Association of Central Cancer Registries. The NAACCR is one of seven agencies that produced the report.

The overwhelming message, say scientists and physicians at the Vanderbilt-Ingram Cancer Center, is that conquering cancer will take more than better treatments. It will take learning more about what causes cancer and figuring out ways to prevent it. It will take widespread, effective education to make sure the public knows about how to reduce their risks. And it will take making life better for those who develop the disease.

Vanderbilt-Ingram is addressing these issues through a growing program of Cancer Prevention, Control and Population-Based Research. A strong and innovative program in these areas is what distinguishes a Comprehensive Cancer Center, according to the National Cancer Institute, which awarded Vanderbilt-Ingram comprehensive status in 2000. There are only about 40 such centers in the country.

“Despite our advances, the fact remains that once someone has advanced cancer, the outcome is still not very good,” said Dr. Raymond N. DuBois Jr., Mina Cobb Wallace Professor of Cancer Prevention and Vanderbilt-Ingram’s associate director for the program. “An ounce of prevention is worth a pound of treatment,” DuBois said.

In this issue of *Vanderbilt Medicine*, we highlight just a sampling of people and projects that are a part of this program, which includes four major efforts:

- **Epidemiology** – the study of large populations to find the causes of disease, to seek out clues about what causes cancer and how we might intervene to prevent it or develop better treatments.
- **Prevention** – particularly “chemoprevention,” to develop safe agents to stop cancer from developing.
- **Pain and Symptom Management** – to control the emotional, psychological, social, and symptomatic needs of cancer patients and their families.
- **Communication and Outreach** – to make sure all facets of the community have the latest and most accurate information about cancer and its prevention.

– Cynthia Manley

A photograph of a man with glasses, wearing a white dress shirt and a dark tie with small white polka dots, standing in a laboratory. He is looking directly at the camera. The background shows laboratory equipment, including a sink and cabinets. The lighting is bright, coming from a window on the right.

The growing program *of*
cancer epidemi

BY CYNTHIA MANLEY

Smoking causes cancer. It's a simple fact that even smokers will acknowledge. But it took decades of studies of large groups of smokers and non-smokers to say with certainty that smoking tobacco causes lung and other cancers.



logy

As a result, large anti-smoking campaigns were launched. While smoking hasn't been eliminated entirely as a major cause of cancer, it is less popular and less accepted than in years past.

Doing work to pinpoint causes of cancer that ultimately lead to prevention strategies is the goal of a group of scientists in the growing program of epidemiology at Vanderbilt-Ingram Cancer Center.

While in the therapy side of research, scientists are looking at the molecular level to target treatments to the individual, this group of epidemiologists is turning to large groups of people to understand how environment, behaviors like diet and exercise, genetics and other factors interplay to cause cancer.

While in the therapy side of research, scientists are looking at the molecular level to target treatments to the individual, this group of epidemiologists is turning to large groups of people to understand how environment, behaviors like diet and exercise, genetics and other factors interplay to cause cancer.

“Cancer has a long incubation period – 10, 20 years – and it is not super common like colds,” explained Dr. Wei Zheng, professor of Medicine and Ingram Professor of Cancer Research. “In a lot of research conducted using cells and animals, experiment conditions can be well-controlled. But if we want to look at what happens to humans in real-life, there is a lot of variability. Humans are free-living creatures and they have a lot of choice. You have to increase the sample size to give the statistical power to control for those variables.”

Vanderbilt has a long history in cancer epidemiology, including the landmark study of Drs. David L. Page and William D. DuPont in benign breast disease (see page 22) and work by Drs. Walter E. Smalley Jr., Wayne A. Ray, and Marie R.

Griffin in the areas of medication use and disease risk.

But in the late 1990s, as Vanderbilt-Ingram Cancer Center sought designation as a Comprehensive Cancer Center by the

an academic home and a chance to work with epidemiologists focused on other diseases as well.

An innovative strategy for growing the cancer epidemiology effort is the partner-

Vanderbilt-Ingram's population-based cancer studies involve groups of people as close to home as Nashville and as far away as Shanghai, China.

National Cancer Institute, it became clear that the center needed a stronger emphasis in this important area. At the same time, Vanderbilt University Medical Center was working to establish a program in epidemiology, clinical outcomes and health policy under the leadership of Dr. Robert S. Dittus, director of the Center for Health Services Research (CHSR) and the division of Internal Medicine.

The two efforts combined to result in a strong program with dozens of researchers working on a variety of projects to define cancer causes and risk factors. The opportunity to be a part of a leading cancer center was attractive to faculty interested in cancer epidemiology. The CHSR and the division of Internal Medicine gave these new recruits

ship that the Vanderbilt-Ingram Cancer Center struck with Rockville, Md.-based International Epidemiology Institute (IEI). This group was founded by two former NCI scientists whose work has helped define many of the known cancer causes to date. Many of the members of IEI have Vanderbilt faculty appointments and are actively collaborating with scientists based at Vanderbilt.

A major project that has come from this partnership is the Southern Community Cohort Study, led by William J. Blot, Ph.D., CEO of IEI and professor of Medicine, and Dr. Margaret Hargreaves, a member of the Meharry Medical College faculty. This study, conducted through the Meharry-Vanderbilt Alliance, aims to iden-

tify reasons behind racial differences in cancer incidence and outcomes, and promises to provide a wealth of data that will be useful in understanding other major illnesses, including heart disease and diabetes. (see page 17).

Vanderbilt-Ingram's population-based cancer studies involve groups of people as close to home as Nashville and as far away as Shanghai, China.

Zheng began a cohort study of women in Shanghai in 1996 that has grown to more than 75,000 participants. Zheng and his colleague Dr. Xiao-Ou Shu, professor of Medicine, are testing a number of hypotheses in this population, including whether intake of soy, green tea, cruciferous vegetables, garlic and so forth impact the incidence of cancer. A subset of the population is being studied specifically for breast cancer risk, and a number of cancer-related genes are also being investigated.

"These are hypotheses that cannot be studied in the United States, but can be studied in China where there is a high intake of these substances and where the population is more genetically homogeneous," Zheng said.

A similar cohort of men is being built,

Taking the cancer message into the community



Taking messages about prevention and early detection into the community where folks can put them into practice is the job of the Office of Communication and Outreach. This team, led by Vanderbilt-Ingram associate director Vali Forrister, does this through a coordinated program of seminars and workshops, awareness and survivor events, a website and educational materials.

Key components of Vanderbilt-Ingram's outreach program include the Breast Cancer Health Forum, an annual series of events during National Breast Cancer Awareness Month (October), and the Cancer Answer series, launched this year to provide informal interaction between community members and cancer experts on a variety of topics.

Cathleen Donnelly, director of Outreach Programming, estimates that by the end of 2002, she and her colleagues will have conducted more than 50 outreach events, reaching more than 50,000 individuals.

For more information about these events, visit www.vicc.org or call (615)936-5855.

- CYNTHIA MANLEY

half of which will be husbands of women in the Shanghai Women's Health Study and half of which will be new recruits. "We want to include both wives and husbands in the study because this will provide us with a powerful opportunity to study lifestyle factors in relation to disease risk," Shu said.

Zheng is also studying breast cancer in women in Nashville. Five area hospitals are participating in the study, which looks at the interaction between genetics and lifestyle. "We ultimately want to have specific information to help women at high risk of breast cancer," Zheng said.

Shu's work also focuses on childhood cancers and the safety and effectiveness of alternative therapies. In collaboration with the Children's Oncology Group, she is looking at the preconception and prenatal environment for factors related to pediatric cancers. She also has recently received funding through the Department of Defense Breast Cancer Research Program to study herbal use, including soy and ginseng, in prolonging survival and improving quality of life and to evaluate for possible side effects." Ginseng has been used in China for more than 3,000 years to recover from illness and to boost the immune system, but it is a very potent herb," Shu said. "We need to understand whether it helps cancer patients and what the side effects might be."

Other work in the program focuses on colorectal cancer and prostate cancer.

In collaboration with Indiana University and as part of Vanderbilt-Ingram's GI SPORE (see page 18), Zheng is working to identify molecular markers of recurrent colorectal polyps to help make screening for colorectal cancer more cost-effective. And Jay H. Fowke, Ph.D., assistant professor of Medicine, is studying whether higher cruciferous vegetable intake can reduce risk of colorectal cancer.

"It is generally accepted that men and women who have colon polyps are at higher risk for colorectal cancer but other than

having regular screenings, what can we tell them," Fowke said. "A lot of research suggests that cruciferous vegetables may reduce risk, so there may be some simple ways to alter your diet that will alter your risk for this type of cancer." A pilot study funded by the NIH will measure markers of colorectal cancer risk before, during and after cruciferous vegetables are added to the diet of 20 patients who have had adenomatous colon polyps. If the intervention makes a difference in this group, a larger trial will be launched.

Fowke is also working to identify markers of risk of prostate cancer, including markers of steroid hormone susceptibility in men with high-grade prostatic intraepithelial neoplasia, thought to be the stage before cancer development. A pilot study at Vanderbilt, the Nashville Veterans Administration Medical Center and Meharry Medical College will focus on markers for obesity, which observational studies have shown to be strongly associated with prognosis.

Work by Dittus and Dr. Reid M. Ness, assistant professor of Medicine, to demonstrate the effectiveness and cost-efficiency of colonoscopy in reducing colorectal cancer mortality contributed to the decision last summer to provide Medicare coverage for the screenings.

This sampling illustrates the breadth of work being done in cancer epidemiology at the Vanderbilt-Ingram Cancer Center. Zheng noted that collaborating with other institutions and seeing investigators' work replicated by others are critical to the goal of establishing cancer causes and developing interventions. "Even the same topics need to be studied by others in different groups, different places, using different methods," he said. "That's the only way we can be certain." ●

Studying cancer in African Americans

Vanderbilt-Ingram's population-based research includes the potentially landmark Southern Community Cohort Study, a longitudinal study of more than 100,000 individuals, two-thirds of them African-American.

The study will examine lifestyle and genetic factors as potential causes of cancer and follow this group over many years to better understand why African-Americans are more likely to develop and die of cancer than other groups.

Enrollment began last spring at more than a dozen federally funded community health centers in the Southeast and has been proceeding on schedule, said William J. Blot, Ph.D., principal investigator. "We've been pleasantly surprised at the high percentage of participants (93 percent) who have agreed to give biologic specimens in addition to participating in the lifestyle survey," he said. "We hope that trend persists through the recruitment period."

Researchers at Vanderbilt-Ingram Cancer Center, Meharry Medical College and the International Epidemiology Institute are leading the study, funded with a \$22 million, five-year grant from the National Cancer Institute. Because of federal budget constraints, that grant fell about \$6 million short of projected needs. Vanderbilt-Ingram, through its ongoing Imagine a World Without Cancer Campaign, has committed to raising the balance needed to fully fund the initiative.

For more information about the study, visit www.southerncommunitystudy.org.

- CYNTHIA MANLEY

Specialized programs bring basic scientists and clinicians

together

A major thrust of the National Cancer Institute's network of Comprehensive Cancer Centers is to bridge the gap between the laboratory and the bedside, get basic scientists, physician scientists, and clinical investigators working together, and conduct innovative research with implications for all aspects of cancer: etiology, prevention, detection, treatment and education.

by Cynthia Manley

That's also the thrust of the NCI's SPORE (Specialized Program of Research Excellence) program, except on a disease-specific level. The SPORE program is a 10-year-old NCI program that is getting renewed emphasis under the leadership of the NCI director, Dr. Andrew von Eschenbach.

With SPOREs, the name of the game is making an impact on disease. SPOREs are organized at cancer centers around a specific type of cancer. Each project must involve both basic and clinical scientists and must be focused on translational research. And each SPORE must have a population-based research component.

"The SPOREs have been extraordinarily successful at accomplishing just what the Comprehensive Cancer Centers are all about – bringing basic scientists and clinicians together and providing a mechanism that ensures their collaboration," said Dr. Harold L. Moses, Benjamin F. Byrd Professor of Oncology and director of Vanderbilt-Ingram Cancer Center.

With SPOREs in lung and gastrointestinal cancer, Vanderbilt-Ingram is one of only a handful of centers with more than one active SPORE grant. Each brings about \$14 million over five years. In addition,

Vanderbilt-Ingram researchers are awaiting word about expected funding for a SPORE in breast cancer, and have submitted a grant for a SPORE in prostate cancer. Plans are under way to develop SPORE proposals in other cancer types, potentially including melanoma, brain cancer, leukemia, and head and neck cancer.

"These have to be projects that the NCI believes are really going to make an impact on disease," said Dr. Carlos L. Arteaga, leader of the team that has submitted the Breast Cancer SPORE proposal. This application received an outstanding priority score and funding is anticipated.

One reason the grants are so attractive to scientists is their flexibility, said Dr. David P. Carbone, Ingram Professor of Cancer Research and director of Vanderbilt-Ingram's first SPORE, in lung cancer. Each year, investigators submit reports of their work and progress, but they have the option to expand, contract, eliminate or add projects as developments warrant.

"This gives us the flexibility to rapidly respond to the most promising projects and make the most of the research," Carbone said.

SPOREs fund specific scientific projects as well as core resources to be shared by the SPORE investigators. These cores, in such areas as biostatistics, technologies like DNA microarray and mass spectrometry, informatics, and clinical trials, are vital to the success of the SPOREs. They also provide important funding for career development and pilot projects, which are supplemented by Vanderbilt University and the Cancer Center.

Each SPORE includes investigators from multiple academic departments and research teams. Both of Vanderbilt-Ingram's funded SPOREs in lung and GI cancers and the pending one in breast cancer focus on identifying and developing molecular targets for these cancers, which together affect more than a half million Americans each year.

The Lung SPORE, which was awarded in spring of 2001, includes six scientific projects focused on:

Dr. David Carbone



Dr. Robert Coffey Jr.



PHOTOS BY DEAN DIXON

- Metalloproteinases and their role in small and non-small cell lung cancer. This project includes testing inhibitors of these enzymes to determine response of lung tumors.
- Molecular fingerprinting of lung cancers, using DNA microarray to identify patterns of gene expression that correlate with cancer stage, response to treatment, outcome and metastasis.
- A novel gene, NOTCH 3, whose role in lung cancer development was identified at Vanderbilt-Ingram.
- Radiation therapy in combination with angiogenesis inhibitors, agents that block the development of new blood vessels.
- COX-2 in lung cancer development and the effects of COX-2 inhibitors (like Celebrex and Vioxx) alone and in combination with chemotherapy.
- Population-based studies to correlate long-term use of non-steroidal anti-inflammatory drugs, like ibuprofen, with the risk of lung cancer.

Vanderbilt-Ingram's GI SPORE was awarded last spring. "Before ours was awarded, there were only two SPOREs in GI cancer and neither of them focused exclusively

on colorectal cancer," said Dr. Robert J. Coffey Jr., Ingram Professor of Cancer Research and SPORE director. "This is an important cancer, the second leading cancer killer in the United States, so we are excited about being able to focus on this major public health problem."

The GI SPORE includes five scientific projects focused on:

- The epidermal growth factor receptor (EGFR) as a target for therapy.
- Combinations of drugs that block EGFR and COX-2.
- Use of DNA microarray and mass spectrometry to identify markers that can be used to predict response and tailor therapy for individual patients with rectal cancer.
- The role of p120 – a protein first identified at Vanderbilt – in the spread of colorectal cancer.
- Population-based studies to identify markers for the recurrence of colon polyps with the goal of determining which patients would benefit most from frequent screenings and preventive drugs.

In their proposal for a SPORE in breast

cancer, Vanderbilt-Ingram researchers plan four scientific projects. The main aspects include:

- Study of an EGFR inhibitor in women with operable, early stage breast cancer. The goal is to identify the cohort of breast cancer patients who respond to these type of drugs as well as surrogate markers predictive of EGFR inactivation in situ.
- Test of the hypothesis that breast cancers that respond to the drug paclitaxel (Taxol) can be predicted using select molecular markers and overall protein expression patterns.
- Use of mass spectrometry to analyze protein expression in breast tumors compared to normal tissue, with the aim of identifying protein profiles associated with different disease states, as well as response to therapy.
- An epidemiological study of women with benign breast disease to help define the role of the transforming growth factor beta type II receptor and additional components of the TGF-beta and EGFR signalling pathways in the development of pre-cancerous lesions of the breast. **V**



Dr. Raymond DuBois

• The Journey from health to cancer

How can we stop
it before it happens?

by Cynthia Manley

One way to think about the journey a cell takes from health to cancer is a road trip between two cities, with lots of different ways to get from one to the other. Some folks like the direct route by freeway. Others like the scenic back roads. Still others might combine the two for the most efficient trip.

The targeted therapy approach, using agents that target specific molecules involved in the cancer process, puts roadblocks up to stop the journey at various points along the way.

But where should the roadblocks go to be most effective at heading off the cancer? What about the back roads that might provide an alternate route if the freeway is closed?

And what if you could stop the trip before the car ever left the driveway?

That is what a group of Vanderbilt-Ingram Cancer Center scientists are investigating. In addition to studying the new molecularly targeted agents as potential therapies at various stages of disease and in

combination with other drugs, they are taking the first steps at studying their potential to prevent cancer.

“If we are asking healthy people to take something to prevent a disease, it’s going to require a very safe drug,” said Dr. Raymond N. DuBois, Mina Cobb Wallace Professor of Cancer Research and associate director of Cancer Prevention, Control and Population-Based Research.

The molecularly targeted agents, such as the class that targets the epidermal growth factor receptor (EGFR), appear to fit the bill as safe drugs, posing few – and then typically minor – side effects. The question is, will they work?

Dr. Christina Truica, assistant professor of Medicine, is studying an EGFR-targeted drug, ZD-1839 or Iressa, in patients with ductal carcinoma in situ (DCIS) of the breast, a non-invasive cancer considered to be the precursor of invasive breast carcinoma. Patients who agree to participate will undergo a biopsy and have their tissue tested for expression of total and activated EGFR. They will take Iressa for three weeks, followed by surgery. A tissue sample will again be tested for activated EGFR expression.

“Did this drug actually modulate the pathway,” Truica said, outlining the questions the study will address. “Did we hit the target? Was it effective? What else did we achieve?”

Markers for cell proliferation (which EGFR activation increases) and apoptosis, or programmed cell death (which EGFR activation decreases) will also be examined.

“This is just the very first step to see if we might use Iressa for chemoprevention,” Truica said. “If we prove that it affects the pathway, it might be useful for the prevention of invasive breast cancer.”

And if it works, the drug could fill an important niche. Truica noted that the drug tamoxifen, which is approved for reduction of breast cancer risk, targets the estrogen receptor (ER) while EGFR expression is most often found in breast

cancers that do not express ER. Testing for EGFR is not yet standardized, so estimates vary but as many as half of DCIS and invasive breast cancers probably express EGFR, Truica said.

Truica’s colleagues are studying another EGFR-targeted drug in other breast cancer settings. Dr. Carlos L. Arteaga, Ingram Professor of Cancer Research and Director of the Vanderbilt-Ingram Breast Cancer SPORE and Dr. Mark C. Kelley, assistant professor of Surgery and director of the division of Surgical Oncology, are examining an agent called OSI-774 (Tarceva) in women with early-stage operable breast cancer. Again, the study is not aimed at therapy but at identifying a cohort of breast cancers in which Tarceva has activity and learning what effects this agent has on the cells at this stage of cancer development. The information generated by this study will identify the type of breast cancers that can be targeted with trials of EGFR inhibitors. Like Iressa, Tarceva is conveniently given orally and is very well tolerated with minimal to no side effects.

DuBois says that, as many scientists believe will be the case with targeted therapy, effective prevention strategies may be more complicated than just giving a single pill to target a single molecule. Scientists at Vanderbilt-

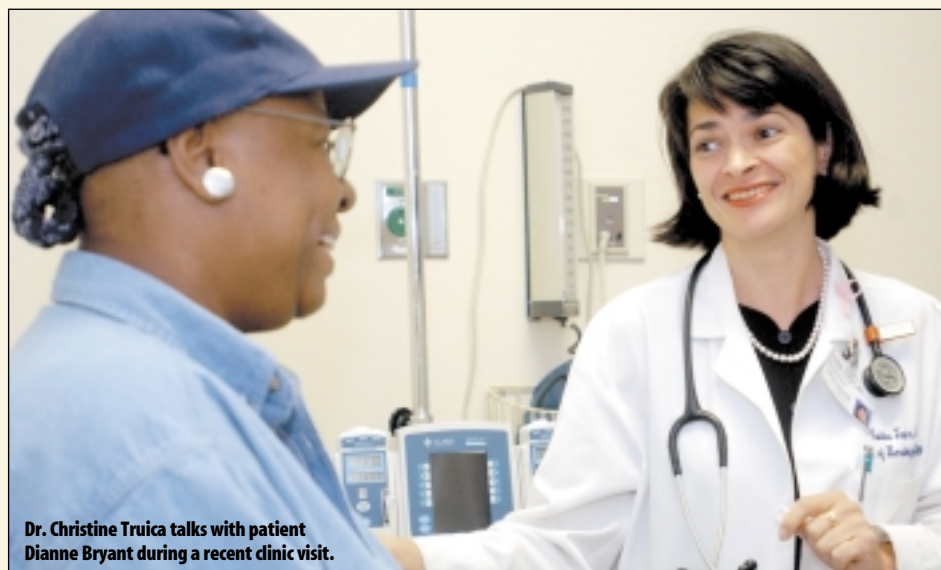
Ingram are working in the lab as well to identify new targets and learn more about how these agents work together and separately.

Other chemoprevention trials at Vanderbilt-Ingram include:

COX-2 inhibitors – DuBois, an expert in the field of aspirin-like COX-2 inhibitors in treating and preventing cancers, is leading a national trial to determine whether one of these agents (celecoxib or Celebrex) can prevent recurrence of precancerous colon polyps. The enzyme known as COX-2 has been linked to development of several cancers, including colorectal, lung and ovarian cancers.

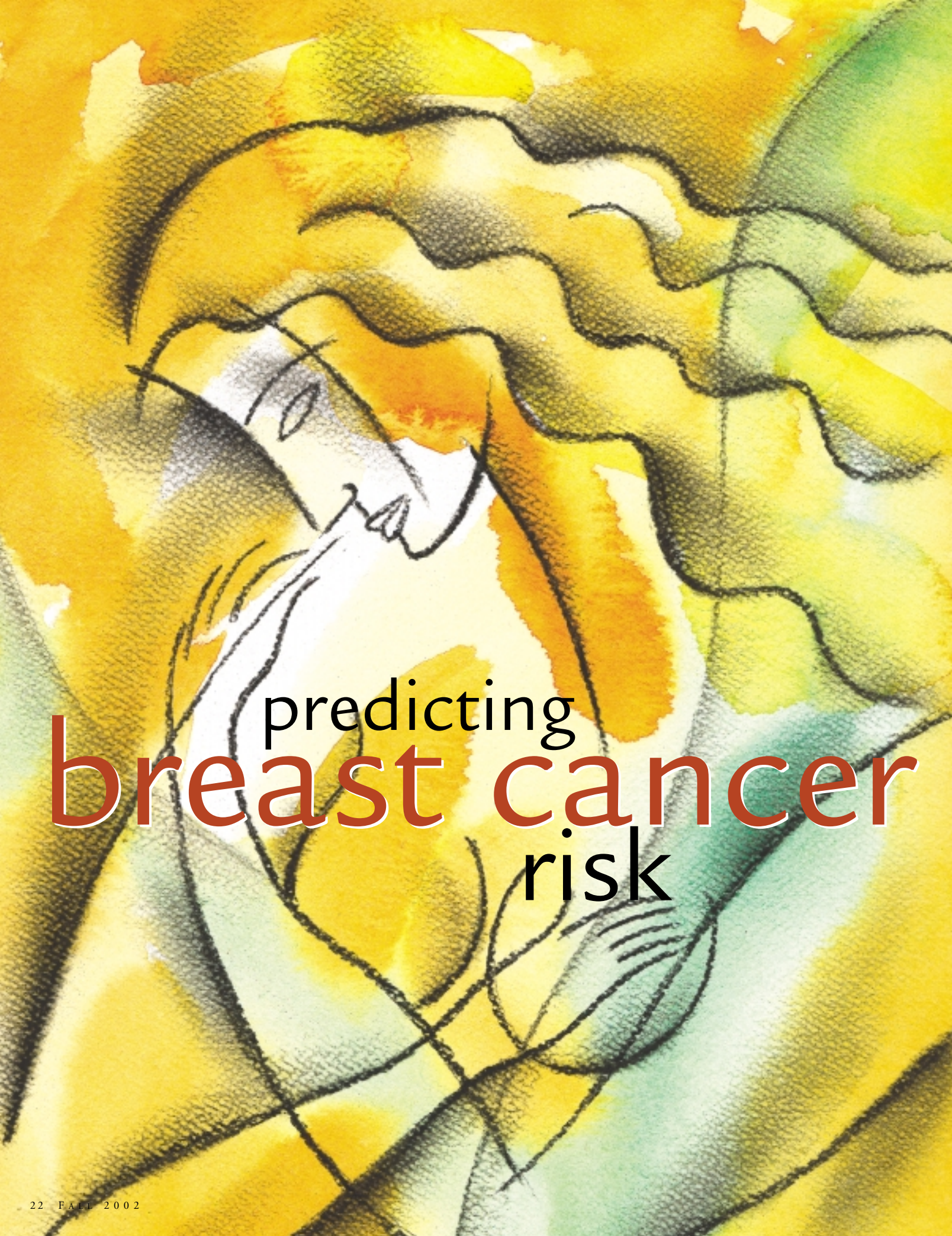
STAR – Kelley is the principal investigator of the Vanderbilt arm of the national study of Tamoxifen and Raloxifene, which aims to determine whether the osteoporosis drug raloxifene is more effective and/or safer than tamoxifen in reducing incidence of breast cancer among high-risk women. These drugs have both estrogen-like and estrogen-blocking effects.

SELECT – Dr. Michael S. Cookson, assistant professor of Urologic Surgery, is leading the Vanderbilt arm of this national trial, which is testing selenium and vitamin E to determine whether the two dietary supplements, individually or together, can prevent prostate cancer. ♡



Dr. Christine Truica talks with patient Dianne Bryant during a recent clinic visit.

DANA JOHNSON



predicting
breast cancer
risk

Bill Dupont was just a child, daydreaming and climbing trees in Montreal, when the biopsies that would define his career were first being performed in Nashville. Those initial breast tissue samples—embedded in paraffin and stored away as part of routine clinical practice—and more than 12,000 more collected since then are part of the largest study anywhere to assess breast cancer risk in women with benign breast biopsies.

by Leigh MacMillan

Dupont, Ph.D., professor of Preventive Medicine, and Dr. David L. Page, professor of Pathology and Preventive Medicine, teamed up in the 1970s to “redefine what is meant by benign breast disease and to associate different levels of breast cancer risk with it,” Dupont said.

At the time, any woman who had a benign breast biopsy was assigned a diagnosis of fibrocystic disease and was considered to be at elevated risk for developing breast cancer. Dupont and Page’s landmark study, published in the *New England Journal of Medicine* in 1985, put an end to that assumption.

The investigators completed pathologic assessments of more than 10,000 biopsy samples and developed precise criteria for diagnosing the spectrum of breast changes from benign to premalignant to malignant. These histologic criteria — how the cells look under the microscope in terms of shape, size, and distribution — did not exist before Page and Dr. Lowell defined them. “It wasn’t a question of cancer, yes, or cancer, no,” Page said. “It was many different patterns, and the question was, what do those patterns mean?”

The investigators also collected follow-up information for the entire set of patients—to determine who went on to develop breast cancer and who did not. Using statistical methods, they linked the histologic diagnoses and the follow-up information.

They found that 70 percent of the women with a benign biopsy had no greater risk for developing breast cancer than women of the same age in the general population. The remaining 30 percent, women who had what the investigators termed proliferative breast disease — an abnormal increase in the

number of breast cells — were at increased risk, Dupont said. Among women with proliferative disease, a subset diagnosed with atypical hyperplasia, an overgrowth of abnormal looking breast cells, had the greatest elevation in breast cancer risk.

“The study was pivotal to really defining the different types of benign breast disease and how they ought to be looked at by physicians and women themselves,” Dupont said. “We were able to reassure large numbers of women that having a benign breast biopsy does not change their likelihood of developing breast cancer.”

“Every woman who has had a breast biopsy since 1985 has been directly impacted by the implications of this work,” said Dr. Roy A. Jensen, associate professor of Pathology and Cancer Biology.

For women whose benign biopsies are correlated with increased breast cancer risk, the findings support more vigilant surveillance. “For a woman who has had a diagnosis of atypical hyperplasia, a mammogram is something that’s not just a good idea, it’s really vital,” Dupont said.

The histologic categories defined by Page and Dupont are now internationally accepted, and other studies, in particular the Nurses’ Health Study at Harvard, have confirmed the findings that certain types of benign pathology are associated with increased breast cancer risk, Page said.

Dupont and Page have continued to add women to their study group—the Nashville Breast Study Cohort—and have amassed information for more than 17,000 women who were biopsied at three area hospitals (Vanderbilt, Baptist, and St. Thomas) between 1952 and 1992. Preserved biopsy samples

exist for more than 12,000 of these women.

In more recent studies, Dupont and Page have worked to characterize molecular markers in the biopsy samples and correlate them with risk. For these studies, Dupont and Page are being joined by Drs. Fritz F. Parl, Melinda E. Sanders, Carlos L. Arteaga, Roy A. Jensen and Harold L. Moses, and Jason H. Moore, Ph.D.


The team is examining numerous proteins including molecules that predict the outcome of invasive breast cancer, so-called prognostic markers. Abnormal expression of these proteins may precede the development of breast cancer.

Dupont, Page and colleagues reported in 1999 that reduced expression of a receptor for transforming growth factor beta (TGF-beta) was associated with increased risk of breast cancer.

The findings made sense, Dupont said, because the normal function of TGF-beta is to slow or stop cell growth.

Though benign biopsies are not yet routinely screened for TGF-beta receptor expression to assess risk, Dupont hopes that day will come. The ideal scenario following a benign biopsy, he said, would be to screen for several different markers that predict breast cancer risk and then provide prophylactic therapies to prevent the development of cancer in those women who are at elevated risk.

“Before you give those prophylactic drugs, you have to know who’s at high risk,” Dupont said. “Our studies have certainly contributed, and we hope will continue to contribute, to that determination.”

Pretty good daydreams for a once small Canadian boy. 

pain
&
symptom
Management Program



Helping patients face cancer
and life after cancer

Preventing cancer from ever developing is the dream, but a cancer diagnosis will be the real-life nightmare for 1.3 million Americans this year. Another estimated 9 million Americans are considered cancer survivors.

by Cynthia Manley

It is for folks like these that Vanderbilt-Ingram Cancer Center has developed its Pain and Symptom Management Program, which falls under the “control” category of Cancer Prevention, Control and Population-Based Research.

Led by Dr. Barbara A. Murphy, associate professor of Medicine, this program is dedicated to treating “the whole patient and family.” The team includes dozens of doctors, nurses, psychologists, nutritionists, surgeons and others from a variety of disciplines.

The program’s clinical component addresses a wide range of physical, psychological and social needs, from managing pain, fatigue and other symptoms during treatment to helping patients adjust to “normalcy” after treatment. Its educational component trains current and future clinicians about these special needs of patients and how best to address them. And its research component seeks to find new evidence-based ways to make life better for patients and their families as they face cancer – and life after cancer – together.

“As more and more patients survive their cancer, we have to think about what we’ve left them with,” said Nancy Wells, D.N.Sc., director of Nursing Research. “We’ve got patients with chronic fatigue, hot flashes and pain for a long, long time. People really work to extend life, but we’ve got to think about – and do something about – what that life is like.”

Murphy is the first to admit that in years past, research in supportive or palliative care has been thought of as “soft science.” It deals with issues that are more challenging to measure than the size of a tumor on an X-ray. “But we’re starting to develop an edge and be seen as more legitimate,” Murphy said.

Bruce Compas, Ph.D., who recently joined Vanderbilt-Ingram Cancer Center as director of psycho-oncology, agreed. “Much of what we do may seem intuitive, but our job is to document it using the very best science that we have,” he said.

The program began in 1999 with a seed grant from private industry. The investment is paying off. A recent \$5 million gift has been made to allow the program to evolve into a Center for Palliative and Integrative Medicine. Meanwhile, its researchers are starting to grow their pilot projects into research grants awarded by the National Institutes of Health. Several have RO1 grants, while others are preparing grants for submission.

Researchers in the program say that the team culture Murphy has fostered enables them to work together to develop the strongest possible research. “Everybody who’s a part of this program is all about improving a patient’s quality of life,” said Kathleen A. Dwyer, Ph.D., associate professor of Nursing. “We all want patients and their families to enjoy life and to see their

identity as more than somebody with cancer. It’s a model for what a truly interdisciplinary, as opposed to multi-disciplinary, program can be.”

Projects in the research program touch on a wide range of issues, from ways to mitigate negative effects of treatment to coping with changes in family dynamics created by a diagnosis.

For instance, Wells is leading projects that address symptoms in very different ways. One looks at music therapy in patients with head and neck or GI cancers who are undergoing radiation therapy. This study is examining the therapy’s impact on fatigue, depression, anxiety and pain. Another project is developing pain medication titration standards to enable an oncology nurse to alter pain medication as a patient’s pain increases. A pilot study found significant reductions in pain and pain-related distress over a four-week period. A larger study is now being planned through the Vanderbilt-Ingram Cancer Center Affiliate Network (a network of a dozen-plus community hospitals that participate in Vanderbilt-Ingram’s clinical trials program) to determine if these titration standards are helpful in the community setting.

Janet M. Friedmann, Ph.D., research assistant professor of Medicine, is examining the effects of treatment on weight at both extremes, weight loss and weight gain.

She has found that head and neck cancer

patients who have undergone “function sparing” treatment – radiation and chemotherapy but no surgery – have significant problems meeting their nutritional needs and often make adaptations that increase their risk of other serious illnesses, like heart disease and diabetes. “They have a lot of mucositis and dry mouth,” she said. “They often put a lot of fat into their food just to get it down. They change their dietary patterns dramatically. So they’ve survived their cancer, but what are we setting them up for in the future?”

For many breast cancer patients, weight gain is the problem. “On average, women who have undergone treatment for breast cancer gain 10 to 20 pounds at six months,” Friedmann said. She calls it the triple threat — disfiguring surgery, hair loss and then weight gain — that impacts their body image and may put their health at risk. With a Discovery Grant from Vanderbilt-Ingram, Friedmann is examining whether breast cancer and/or its treatment changes a woman’s metabolic rate, leading to weight gain.

Janet S. Carpenter, Ph.D., RN, associate professor of Nursing, is studying another troublesome result of breast cancer treatment for many women, incessant hot flashes. “Some of our patients have 30 hot flashes a day, around the clock,” Carpenter said. “It interferes with their sleep and exacerbates depression and fatigue.” She is studying low-doses of venlafaxine (Effexor), which at higher doses is prescribed as an antidepressant, in women who have undergone chemotherapy for breast cancer. Venlafaxine targets three biochemical pathways — norepinephrine, serotonin and dopamine — and it is the blocking of norepinephrine that researchers believe will affect the regulation of body temperature.

Compas and Dwyer are both interested in the psychological aspects of cancer. Specifically, Compas studies how people are affected, emotionally and physically, by stress. Dwyer is investigating how patients

adjust to being “survivors” of what has become more and more a chronic illness.

“Cancer invades the family the way it invades the body,” Compas said. His work focuses on how children are impacted when a parent is diagnosed and how mothers and daughters cope when there is a strong family history of breast cancer hanging over them. Among his findings: adolescents, and especially adolescent girls, fare worse than younger children do. They have more anxiety and depression, but they tend to hide it well from their parents.

“Families tend to protect younger children and they don’t really understand what’s going on,” he explained. “Adolescents understand more – often more than they are ready to deal with – and adolescent daughters in particular take on a much bigger role in the family during the illness.”

Continued work will focus on how best to help parents help their children. Compas is also planning collaborations with researchers at Vanderbilt Children’s Hospital to study effects on families when a child is the family member with cancer.

For many patients, the end of treatment itself is a source of significant stress. “Patients say things like ‘don’t cut the umbilical cord,’” Dwyer said. “The doctors and nurses recog-

nize that it’s stressful because they get the calls for reassurance. Both groups agree there’s got to be a better way.”

Dwyer is following patients and significant others – usually a spouse or other family member – over a year to “understand the experience from the people living it.” She is working with head and neck cancer patients to understand better the sense of isolation that often particularly affects this group. “One factor is that so much of our social functioning revolves around food, and many of these patients have trouble eating,” she said. “Friends will exclude them out of kindness, but these patients will say, ‘I don’t want them to make that decision for me.’” And she is investigating the use of a homework video series as an alternative to support group sessions for patients who live in rural areas far from Nashville.

“As a Comprehensive Cancer Center that wants to treat the whole person, not just the cancer cells, we need to understand not only what happens during treatment but what happens after treatment ends,” she said. “I really think we can do a better job launching them into that next phase.”

Kresge Challenge

The Vanderbilt-Ingram Cancer Center’s ongoing Imagine a World Without Cancer campaign is rising to the challenge – a “Science Initiative Challenge” from The Kresge Foundation.

The foundation has given an initial \$250,000 to support a shared resource in proteomics research. An additional \$250,000 from The Kresge Foundation, plus an additional \$250,000 from an anonymous donor, will be given for an endowment for continued operation of the facility – provided another \$1 million is raised from other donors for that purpose by June 30.

Proteomics is the study of the cell’s proteins, which carry out all the activity of the cell at the instruction of the genes. This research is critical to understanding what precisely goes wrong in a cell that leads to disease and to identifying new drug targets for cancer and other diseases.

For more information about the Kresge Science Challenge, call Vanderbilt-Ingram’s development office at (615) 936-0233. - CYNTHIA MANLEY



VUMC receives grant to develop bionic blood pressure device

Wild swings in blood pressure are the norm for patients suffering from multiple system atrophy, a progressive neurodegenerative disorder of the autonomic nervous system. When these patients stand, their blood pressure plummets; when they are lying down, it soars.

It is a medical challenge to treat both hypotension and hypertension in the same patient, said Dr. André Diedrich, research assistant professor of Medicine.

"These patients are severely disabled and unable to work," he said. "Drugs sometimes help, but they never restore function completely. We need new treatment options."

Diedrich and collaborators in the Vanderbilt University Autonomic Dysfunction Center have received a grant from the National Institute on Aging to develop a bionic blood pressure control system for patients with multiple system atrophy, also called Shy-Drager syndrome. Diedrich is hopeful that someday these patients could be outfitted with a bionic system that would automatically sense their changing blood pressure and stimulate nerves to keep it within normal limits.

"Of course it's very futuristic," Diedrich said, "but the idea is that — like the pacemaker for the heart — we would create a pacemaker for blood pressure."

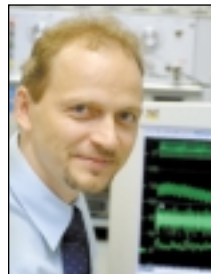
Diedrich's "pacemaker" would replace a defective baroreflex response in multiple system atrophy patients. The baroreflex system is a control system that fine-tunes blood pressure, keeping it within a normal range of values. The system depends on "baroreceptors" — specialized receptors located in the blood vessels — that sense blood pressure and notify an area of the brain called the vasomotor center when adjustments are needed. The vasomotor center, in turn, adjusts blood pressure by controlling sympathetic nerve traffic and thereby changing heart rate and blood vessel constriction.

"The idea is to replace the vasomotor center with a type of microcomputer system which will sense the blood pressure and will somehow stimulate the nerves to change blood pressure," Diedrich said.

The bionic system depends on the patients having intact sympathetic nerves that can be stimulated — which is the case for multiple system atrophy patients. Diedrich participated in the studies, which demonstrated that, in contrast to previous beliefs, these patients do have functional sympathetic nerves, but that these nerves are no longer controlled by the brain.

Diedrich and colleagues will use a rat model system in which the baroreflex has been surgically interrupted to develop prototypes of their bionic baroreflex. They will stimulate nerves in the spinal column using a variety of frequencies and study the blood pressure responses. These early studies will inform the development of algorithms that allow computerized blood pressure control.

The investigators have selected epidural nerve stimulation as a model because they hope to test their ideas in patients with previously implanted epidural spinal stimulators for pain relief. The FDA-approved epidural spinal stimulator system can deliver varying frequencies and amplitudes of stimulation to achieve maximal pain relief. Depending on the frequencies used for stimulation, Diedrich said, blood pressure modulation may also occur. - LEIGH MACMILLAN



DR. ANDRÉ DIEDRICH

DANA JOHNSON

VUMC leads way in cancer drug OK

The approval of a new drug for advanced colorectal cancer provides an important new option for patients whose disease has defied other therapies, says the Vanderbilt-Ingram Cancer Center investigator who led a key North American study of the drug.

The U.S. Food and Drug Administration has approved oxaliplatin to treat patients whose metastatic colorectal cancer has progressed after standard chemotherapy. The approval was based on data from a multicenter trial in the United States and Canada, led by Dr. Mace L. Rothenberg, which demonstrated that adding oxaliplatin to standard chemotherapy was better than either one alone at shrinking tumors and keeping them in check.

"Until now, there was no known effective therapy for people whose colorectal cancer progressed following front-line therapy," said Rothenberg, Associate Ingram Professor of Cancer Research and associate professor of Medicine. "Now we have an option for these patients."

Colorectal cancer is largely curable if caught early, when a tumor is still confined to the colon or rectum. About 90 percent of patients diagnosed at this stage will be alive five years later. However, just more than a third of colorectal cancers are caught at that stage, according to the American Cancer Society.

If the cancer has spread regionally to nearby organs or lymph nodes, five-year survival drops to 64 percent. And for patients with metastatic disease — whose cancer has spread to distant sites — five-year survival plummets to only about 8 percent.

"It is in the metastatic setting, among patients who have failed previous chemotherapy, that this trial demonstrated a benefit in terms of tumor shrinkage and time to tumor progression," Rothenberg said.

Oxaliplatin, which works by interfering with the copying of DNA as cells divide, was approved in 1996 for use in France, where its manufacturer is based. It has since been approved in other countries in Europe, Central and South America and Asia.

- CYNTHIA MANLEY



Heart attack risk factor examined at VUMC

In today's fast-food society, where 60 percent of the population is overweight and 30 percent is classified as obese, the risk of heart attack is increasing along with our waistlines. Age and excessive weight can be a lethal combination as coronary arteries become blocked, triggering a heart attack. And, it turns out, the oft-cited culprit cholesterol is not always at fault.

A group of Vanderbilt researchers, led by Dr. Douglas E. Vaughan, C. Sidney Burwell Professor of Medicine and professor of Pharmacology, has spent the last 10 years focusing on the role of the protein plasminogen activator inhibitor-1 (PAI-1) in cardiovascular disease. In a recent article in the journal *Circulation*, the group reported the creation of a unique strain of mice that overproduces the human PAI-1 protein, which results in coronary artery clotting and heart attack in the mice.

"This protein is emerging as a 21st century risk factor for heart disease," Vaughan said. "We think the model is a unique platform for understanding not only the role of PAI-1 in cardiovascular disease, but also for potentially testing the first generation of inhibitors of PAI-1 that are being developed as potential agents in

prevention of heart attacks."

PAI-1 is an important element in the body's natural system for preventing clots within blood vessels. The system reflects a fine balance between the opposing forces known as plasminogen activators, which act as anticoagulants, and plasminogen activator inhibitors, which promote clotting. These short-lived proteins are synthesized in the blood vessel walls and circulate in low concentrations in the blood, cooperating to ensure clotting happens only when and where it is needed. Levels of PAI-1 are known to be higher in individuals who are overweight.

Vaughan and then post-doctoral fellow Mesut Eren (now a research assistant professor in Medicine) engineered a strain of mice that overexpresses a form of human PAI-1 that is longer-lived than the natural protein, providing a larger window in which to study its function. The transgenic mice have a few noticeable effects: they're bald, they have enlarged spleens and livers, and their blood production occurs in the spleen, rather than the bone marrow.

But the most exciting thing from a cardiovascular point of view, Vaughan says, is that, as they age, about half the mice

spontaneously form clots in their coronary arteries, without evidence of hypertension, atherosclerosis, or high lipid levels.

"It's really hard to make a mouse have a heart attack," Vaughan said. "You can make mice very hypercholesterolemic and they are great models of atherosclerosis, but they don't develop coronary clots. I think what this is saying is that in a mammal, it's enough to have a high PAI-1 level to precipitate the clotting of the coronary arteries and a heart attack."

In these mice the clots occur predominantly in the arterial vessels, and not in the venous system. According to Vaughan, this observation resonates with a theory put forth in the *New England Journal of Medicine* in 1999 by Robert Rosenberg of Beth Israel Hospital suggesting that there are different anti-coagulant mechanisms in different vascular beds in the body. So, for instance, the brain has a different system from the heart, which is different from the liver. Because PAI-1 has the power to inhibit all three of the major anticoagulant systems in the coronary arteries, that could explain why the mice are experiencing selective clotting there. - MARY BETH GARDINER

Dr. Harry Jacobson elected into IOM

Dr. Harry R. Jacobson, vice chancellor for Health Affairs, has been elected into the Institute of Medicine of the National Academy of Sciences.

Jacobson joins an elite group of 1,472 individuals who have been elected into the IOM on the basis of professional achievement and of demonstrated interest, concern and involvement with problems and critical issues that affect the health of the public. Election to the IOM comes by a vote of its current members and the competition is great.

"I am extremely honored to have been elected into such a prestigious organization,"

Jacobson said. "It's a high honor that means a great deal to me because it represents the opinions of my peers in medicine. But the honor is not for me alone. Vanderbilt, through the opportunities afforded to me and through its remarkable faculty and staff with whom I have worked, rightfully shares in this recognition."

The IOM was established in 1970 as a unit of the National Academy of Sciences.

"This is a remarkable recognition of Dr. Jacobson's lifelong contributions to nephrology and medicine in general," said Dr. Steven G. Gabbe, dean of Vanderbilt University

School of Medicine and a fellow IOM member. "But it also represents the Institute's belief that Harry Jacobson will continue to contribute to the improvement of medicine in this country."

Jacobson becomes the 11th Vanderbilt faculty member to be elected to the Institute. Others are James F. Blumstein, Dr. William W. Stead, Dr. Steven G. Gabbe, Dr. John A. Oates, Dr. Mildred T. Stahlman, Brigid L. M. Hogan, Ph.D., Colleen Conway-Welch, Ph.D., H. Carl Haywood, Ph.D., Larry R. Churchill, Ph.D., and George C. Hill, Ph.D.

- NANCY HUMPHREY

ANNE RAYNER POLLO



From left, Chris Welty, Mike Cross, Adam Tibble and Brian Armstrong hoist Miriam Miller, Dr. Bonnie Miller's daughter, into the air during the medical school picnic.

DANA JOHNSON



Dr. Bonnie Miller and Dean Steven Gabbe help Kristy Marie Wolske with her white coat.

DANA JOHNSON



Twins Lydia, left, and Lisa White are among 20 medical students from Tennessee.

class of 2006

ANNE RAYNER POLLO



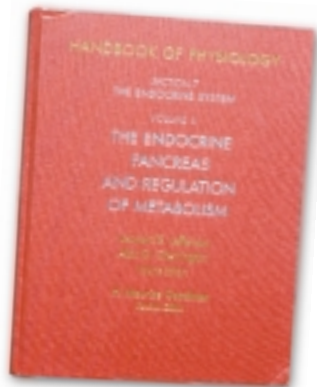
First-year student Courtney Aavang talks with Dr. Lewis Lefkowitz at the medical student picnic.

DANA JOHNSON



Dean Steven Gabbe welcomes Evonne Charboneau as Dr. Gerald Gotterer looks on.

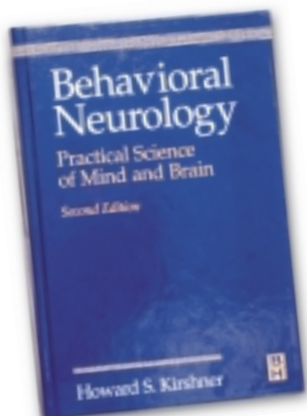
fall book reviews



Handbook of Physiology, Section 7 The Endocrine System, Volume II The Endocrine Pancreas and Regulation of Metabolism

Volume editors: Drs. Leonard S. Jefferson (Pennsylvania State University College of Medicine) and Alan D. Cherrington (professor and chair of Molecular Physiology and Biophysics, VUMC). Section editor: H. Maurice Goodman. Oxford University Press, 2001, 1,254 pages

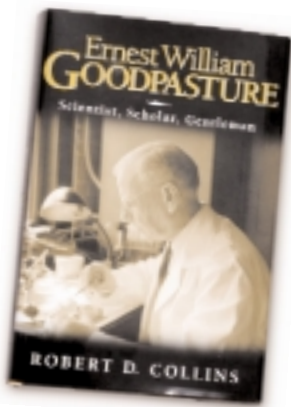
The *Handbook of Physiology* is a critical, comprehensive presentation of physiological knowledge and concepts of the Endocrine System. Like other volumes in the new endocrine section of the *Handbook of Physiology*, this book is meant to be a comprehensive and contemporary resource for teachers, advanced students and investigators. The contributors have emphasized biological processes and functions rather than technology. The book is divided into four parts. The first deals with the production, processing and degradation of the pancreatic hormones insulin, glucagons, somatostatin and amylin/CGRP. The second part focuses on target tissues for metabolic regulatory hormones and reviews both their molecular mechanisms and the cellular actions in vivo. The third part covers the roles of growth hormone, thyroid hormones, glucocorticoids and insulin-like growth factors and part four explores the integrated hormonal responses to a number of physiological challenges including exercises and pregnancy.



Behavioral Neurology, Practical Science of Mind and Brain, 2nd edition

By Dr. Howard S. Kirshner, professor and vice-chair of the Department of Neurology, Vanderbilt University School of Medicine, 2002, Butterworth Heinemann, 474 pages

Fifteen years have passed since the publication of the first edition of *Behavioral Neurology: A Practical Approach*. The second edition, like the first, represents Kirshner's "personal intellectual odyssey through the exploration of questions of the mind and brain." Topics covered include: The Science of Behavioral Neurology; Speech and Language Disorders; Disorders of the Right Hemisphere; Amnesias: Focal Syndromes of Memory Loss; Dementia and Aging; Psychosis; and the Behavioral Aspects of Traumatic Brain Injury.



Ernest William Goodpasture: Scientist, Scholar, Gentleman

By Dr. Robert D. Collins, professor of Pathology, 2002, Hillsboro Press, 466 pages

This is an in-depth look at the life of one of the 20th century's greatest scientists whose work shaped the course of virology and that of Vanderbilt University.

Ernest Goodpasture, "visionary pathologist, consummate investigator, practical idealist and gracious colleague," also served as Dean of Vanderbilt University School of Medicine from 1945 to 1950. He "furthered the cause of humanity through seminal discoveries in the research laboratory and exemplary conduct as an academician," Collins writes in his introduction. The book includes details about Goodpasture's career in research and administration.



Medical School to reward teaching excellence

As a way of rewarding excellence in teaching, Vanderbilt University School of Medicine has named seven faculty members to its first group of Master Clinical Teachers.

Named to the group are: Drs. G. Waldon Garriss III, assistant professor of Medicine and Pediatrics; Joseph Gigante, assistant professor of Pediatrics; R. Michael Rodriguez, associate professor of Medicine; Corey M. Slovis, professor and Chair of Emergency Medicine; Anderson Spickard III, assistant professor of Medicine; John L. Tarpley, professor of Surgery; and John A. Zic, assistant professor of Medicine.

The program is designed to enhance medical education for the school's third- and fourth-year students, to protect time for teaching, which too often takes a back seat to the faculty's research and patient care demands, and to improve the teaching skills of VUSM faculty members, said Dr. Steven G. Gabbe, dean of VUSM.

Two other medical schools — the University of California at San Francisco and Harvard — have similar programs.

"One of the key elements of our Academic Strategic Plan is the development and implementation of a program to reward excellence in teaching," said Dr. Steven G. Gabbe, dean of VUSM. "The Master Clinical Teacher Program has been designed to promote the advancement of medical education by funding the teaching and related scholarly activities of our school's best clinician educators."

The selection of the Master Clinical Teachers was made by members of the Dean's Executive Council, two third-year students, two fourth-year students and two house officers who graduated from VUSM.

Gabbe said with pressures on the faculty, time for teaching, which has traditionally been poorly rewarded, is even more threatened.

"While faculty are expected to teach, in my experience, promotion and tenure committees don't put as much value on teaching accomplishments as they do research. At the same time, members of the faculty are under pressure to see more patients. As a result, students are getting less direct one-on-one time with the faculty."

Awards are for salary support of \$50,000 per year for three years.

The accomplishments of the Master Clinical Teachers will be reviewed annually and funding continued if their performance is satisfactory. A Master Clinical Teacher may be re-nominated for the award at the end of the three-year period.

Future plans call for developing programs to support the school's most outstanding basic science educators as well as faculty who contribute significantly to teaching house officers and clinical fellows. - NANCY HUMPHREY

Meharry, VUMC receive \$6 million to study asthma

Meharry Medical College and Vanderbilt University Medical Center are teaming up to try to understand why some minority and low-income groups suffer disproportionately from asthma.

The National Heart Lung and Blood Institute has awarded a five-year, \$6 million grant to Meharry and Vanderbilt to establish a new Center for Reducing Asthma Disparities.

Dr. Ruben Pamies, chairman of Internal Medicine at Meharry, and Dr. James R. Sheller, associate professor of Medicine at Vanderbilt, will direct the Meharry/Vanderbilt center, one of five in the country.

While the number of Americans with asthma — more than 14 million people — has doubled since the late 1980s, it is not known why African-Americans are affected more frequently than whites. "The center will help us begin to find out some of the reasons why," Pamies said.

In addition, says Sheller, "the center will allow us to train investigators in many different disciplines to undertake research in the broad field of asthma disparities."

The center is an initiative of the Meharry/Vanderbilt Alliance, established in 1999 to promote collaboration between the two institutions in teaching, research and patient care. Similarly, the four other asthma centers are partnerships between medical research institutions and those that serve minority or economically-disadvantaged populations.

They include Johns Hopkins University and Howard University; Brigham and Women's Hospital and the Center for Community Health Education; Northwestern University and Cook County Hospital; and Rhode Island Hospital and the University of Puerto Rico in San Juan.

The Meharry/Vanderbilt Center will focus on four research areas: outcomes of pregnant asthmatics; the effectiveness of an intensive treatment intervention to help minority pregnant asthmatics; ways that minority asthmatics experience and respond to asthma symptoms; and possible differences in responses to asthma treatment in African-American and white children with severe asthma.

- NANCY HUMPHREY



John Gore chosen to lead new imaging initiative

John C. Gore, Ph.D., has a clear vision for the new Vanderbilt University Institute of Imaging Science — that it will be one of the top imaging research centers in the world.

Gore, internationally recognized for his magnetic resonance imaging research, has joined the faculty as Chancellor's University Professor of Radiology & Radiological Sciences and Biomedical Engineering and director of the new institute. He and a team of more than a dozen scientists moved to Vanderbilt from Yale University.

"Having Dr. Gore and his accomplished colleagues join our faculty adds significant strength to our research programs in both basic sciences and translational research," said Dr. Steven G. Gabbe, dean of the School of Medicine.

Kenneth F. Galloway, Ph.D., dean of the School of Engineering, also expressed enthusiasm for Gore and his team's recruitment and the establishment of the institute. "Their pro-

grams and the ongoing research and instruction in biomedical imaging will bring Vanderbilt to world-class status in this area," he said.

The Institute of Imaging Science is a university-wide initiative that will bring together engineers and scientists whose interests span the spectrum of imaging research — from the underlying physics of imaging techniques to the application of imaging tools to study the brain. Gore's joint primary appointments in the schools of Engineering and Medicine reflect the trans-institutional scope of the new institute, which is being supported by the participating schools and by the Academic Venture Capital Fund, a novel Vanderbilt program set up to provide financial backing for academic initiatives that will have national impact.

"It makes sense to create imaging centers that both foster the basic underlying science of medical imaging and encourage other investigators to use imaging as a research tool



DANA JOHNSON

to address a wide range of questions," said Gore, who also is professor of Physics and Molecular Physiology & Biophysics. "Vanderbilt understood that concept and was prepared to support it."

The new institute will have a core program of research related to developing new imaging technology based on advances in physics, engineering, and computer science, Gore said. And it will promote applied research, in collaboration with biologists and physicians who have interesting questions that imaging can address. A major thrust of the new imaging institute will be research using functional magnetic resonance imaging (MRI). At Yale, Gore directed the Nuclear Magnetic Resonance Research Center, one of the leading centers in the world for magnetic resonance imaging research.

- LEIGH MACMILLAN



DANA JOHNSON

VUMC nets \$9.5 million to study autonomic nervous system

Fortunately, there are some things we don't have to think about doing. We don't have to consciously keep our hearts beating steadily; we don't have to change our blood pressure to avoid fainting when we stand. The autonomic nervous system takes care of these things for us.

But it can run into problems. A group of VUMC investigators has received a \$9.5 million, five-year Program Project Grant (PPG) from the National Heart, Lung, and Blood Institute to study disorders of the autonomic nervous system. The grant is a renewal and expansion of a PPG that was first awarded in 1997.

"We doubled the size of our initial pro-

gram, and the reviewers seemed to like it," said Dr. David Robertson, Elton Yates professor of Medicine, Pharmacology, and Neurology, director of the Clinical Research Center, and principal investigator of the grant. "It is said to be the only fully patient-oriented research PPG in the Heart Institute."

PPGs support a group of investigators "with the idea that we can do more together than we could ever do on our own," Robertson said. "Our mission is to understand the pathophysiology of autonomic nervous system disorders so we can treat these disorders more effectively."

Disorders of the autonomic nervous system usually cause very high or very low heart rates or blood pressures. The most common of these disorders is orthostatic intolerance — a syndrome characterized by an increase in heart rate (at least 30 beats per minute) on standing. For someone who

suffers from orthostatic intolerance, the simple act of standing up causes a racing heart, nausea, headache, dizziness, and even fainting. The disorder affects more than 500,000 people in the United States.

Robertson and a core group of investigators formed the Vanderbilt University Autonomic Dysfunction Center in 1978 to treat and study patients with orthostatic intolerance and other disorders of the autonomic nervous system.

The long history of patient care and research in this area provides a database of clinical information accumulated over the years. And now DNA data are being collected and added to the database, Robertson said. The large number of patients has allowed center investigators to identify previously unrecognized syndromes and develop new treatments. - LEIGH MACMILLAN

President's Corner

On Aug. 19 at 9:30 a.m., six new Canby Robinson Society scholars joined their classmates in Room 208 of Light Hall to begin four hard years of study and discipline. In many ways it will turn out to be much more difficult than they imagined it would be, but at the same time they will find many sources of strong support from faculty, upper classmen, and their own class members. Vanderbilt University Medical School has a firm grip on the number one position, recognized by medical students as the most student-friendly educational environment in the country. This has been the case for many years. During the next four years, these students will be

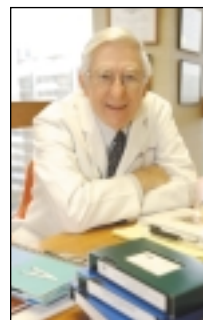
held in high regard by the administration and the faculty, as well as the Housestaff and upper classmen because they represent our hope for the future well-being of our profession. At times they will probably be intimidated by some, bored by a few, but hopefully more often, inspired by most.

Many years ago my medical school class had 52 members starting out that same first day. Four years later the same 52 members graduated together before dispersing to training programs at various locations. Since that time our class has been bound together by the friendships made during those four years. The six new CRS Scholars and their classmates will find that friendships in high school and college are durable but nothing can compare to the friend-

ships that will be made in their next four years.

It is the CRS membership that made it possible for these six outstanding members of the class of 2006 to sit in classroom 208 on Aug. 19. So I hope that the CRS membership will join me in wishing them well as they set out to try to learn the complex mechanisms of health and disease and their duties as future physicians. **CRS**

William S. Stoney Jr., M.D.
President,
Canby Robinson Society



ANNE BAYNER POLLO

Scholarship Update

Vanderbilt Medical Center today has so much going for it: patient care second to none; a research program gaining deserved national recognition; and a Medical School producing 104 doctors-in-training each year who excel in both diagnosis and treatment but also know how to treat their patients with compassion.

I have two grandchildren who will enter college next fall, a watershed event for our family. I sometimes wonder who will provide medical care for them and their families in the future.

The answer, I hope, is that superbly trained Vanderbilt graduates will succeed those exceptional physicians who have cared for you, me, and our families now and in the past.

To ensure that Vanderbilt continues to attract the best aspiring doctors in a universe of many qualified competitors who seek similar individuals, we are working hard to create a larger pool of endowment funds to ease the expense of medical education.

We have had excellent success in this process as the following words from Canby Robinson scholars (full-tuition scholarships) demonstrate vividly:

“The Canby Robinson scholarship has given me the freedom to base career decisions on my interests, rather than on financial security,” said Clarence Smith, a third-year student.

First-year student Claire Turchi said the scholarship allowed her to choose Vanderbilt for her medical education.

“Through the medical school application process, I came to believe that Vanderbilt was an excellent match for me as a student and future physician, but I realized that my potential debt from Vanderbilt could limit my career flexibility,” she said. “This scholarship has allowed me to both choose the school that I believe will give me the best education and keep my future options wide open. Every day I feel very privileged to have the opportunity to attend medical school at Vanderbilt, and the school has already exceeded the expectations I had coming in.”

To put it succinctly, we seek qualified individuals for whom medicine is a calling and we want to respond with significant financial assistance.

– BOB MCNEILLY

New Kennedy Center director charts a more collaborative course

In June, Pat R. Levitt, Ph.D., became director of the John F. Kennedy Center for Research on Human Development. An expert in the area of brain development, his focus is on the genetic and environmental mechanisms involved in disorders of cognition and emotion.

Along with Levitt's arrival came the closer bond between the Kennedy Center and Vanderbilt University Medical Center, and the hope of promoting interdisciplinary scientific pursuits to utilize advances in biology, the behavioral sciences and education and ultimately to improve and enrich the lives of persons with developmental disabilities.

The Kennedy Center is a national developmental disabilities research center, one of 14 nationwide supported by the National Institute of Child Health and Human Development. As a trans-institutional research center, the Kennedy Center has changed from being an administrative unit of Peabody College to a University-wide research and outreach center, with institutional support shared by Peabody, the School of Medicine and the College of Arts and Science.

Levitt said he knows there will be obstacles ahead in trying to bring disparate scientific and educational backgrounds to the same philosophical table. But he is optimistic that the individuals who are being asked to collaborate will find more in common with each other than significant differences.

"I actually consider everybody doing research here — independent of the methodology that they use — to be neuroscientists," Levitt said. "They're

all doing research, which means they've generated a hypothesis. They have a problem, and they're trying to figure out a way to resolve that problem, or disprove or prove the hypothesis with some controlled approach, where they can actually interpret what they get out the other end. I think whether it's my work, trying to understand basic cellular and molecular mechanisms of brain development, or Ann Kaiser's work, trying to understand emotional regulation in special populations, we're really trying to understand the complexities of the organ in which all this occurs, and that's the brain."

Annette Eskind, chair of the Kennedy Center Leadership Council and a Canby Robinson Society member, has been a long-time supporter of the Kennedy Center, and welcomes this new era of collaboration. "It's a way to have all the disciplines benefit from all the research being done, and the extensive knowledge and abilities present here," she said. "We share that vision with Pat Levitt."

The new director said he is proud to be at a center where pioneers like Susan Gray and Nicholas Hobbs stretched the boundaries of accepted thought and practice. "They were really revolutionaries, in terms of the science they were doing," Levitt said. "They already had the vision of wanting to do biological and behavioral research together. They did research to institute social change in our society. This concept of early intervention — of taking children with atypical development and placing them physically in the same room with typically developing chil-

dren — was foreign to this culture. Pushing the envelope takes courage."

Levitt believes the Kennedy Center will continue to push the envelope by infusing the Kennedy Center with existing investigators who are excited about the prospect of interdisciplinary activities, and hiring new investigators who have a willingness to work in a collaborative environment.

"The physical presence of the Medical Center, so close to the hub of activities in behavioral and educational research, makes it a more likely possibility that geneticists, behaviorists and interventionists would feel comfortable doing research and training together," Levitt said.

If fund-raising activities are successful over the next five years, a new Kennedy Center building will adjoin the existing MRL, with additional Susan Gray classrooms, and much needed clinical space. That plan will certainly get a boost now that Hobbs Society donors are CRS members too.

Levitt anticipates that areas of growth will occur in a number of programs, but growth in biomedical research — currently underrepresented — is critical. "Integrating the Hobbs Society with the CRS will draw the Medical Center resources into helping to support these integrative activities in which they traditionally have not been involved before," Levitt said. **CRS**

— NED ANDREW SOLOMON

For more information about the Canby Robinson Society, contact Missy Eason, Director of Donor Relations, Vanderbilt University Medical Center, D-8223, Medical Center North, Nashville, Tenn. 37232-2106, (615) 343-8676 or 8677, fax (615) 343-0809, e-mail: missy.eason@vanderbilt.edu

New Susan Gray playground invites all children to laugh and learn

When Wendy Brooks attended the very first preschool class at the Kennedy Center, long before it was the Susan Gray School for Children, she spent many happy hours on the playground. Enlightened educators in the groundbreaking program, where kids with disabilities were included with typically developing children, believed that there is much to be learned in the pursuit of play.

“There was lots of fine and large motor development on the playground in an atmosphere of fun,” says Linda Brooks, Wendy’s mom. “It was indirect learning, which most times is more effective with little ones. For Wendy, the playground started a learning process that carried over into everything.”

“We saw how much Wendy advanced and matured,” says Sam Brooks, Wendy’s father. “She became a more socially adaptable person as a result of being on that playground.”

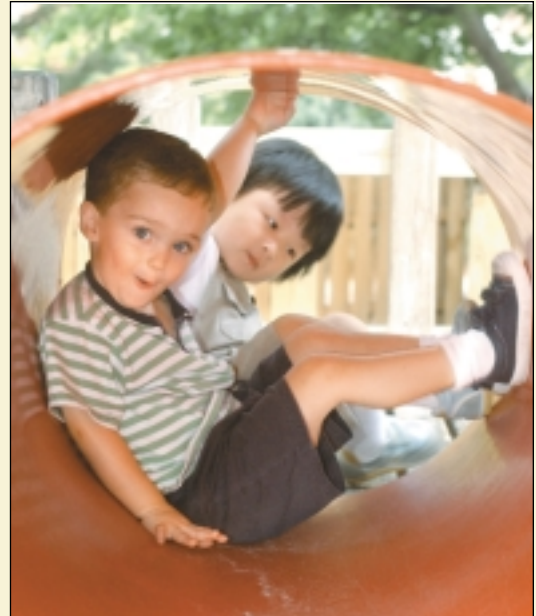
According to the Brooks, who are CRS members, the playground was simply an extension of the hard work — in the guise of fun and games — that was happening inside the classrooms. Parents were encouraged to be involved, and were trained in ways to best promote the development of their children, with a conviction that regardless of the type of disability, kids can progress and lead productive lives. “The things they were doing 30 years

ago are still appropriate now,” Sam said. “They were making sure these kids had a good life, and that their parents were challenged to improve them and help them fit in and be a success in social environments.”

Now in her mid-30s, Wendy works once a week at the Susan Gray School, helping teachers by cleaning and setting up the classrooms, and supporting children in their activities inside the school and out on the playground—still one of Wendy’s favorite locations.

But today’s playground has a decidedly different look. There are the customary swings, sandboxes and climbing structures, but a great effort has been made to create a play area accessible to all children, regardless of physical or cognitive limitations.

A special rubberized safety surface and engineered wood fiber mulch that are feet-, walker- and wheelchair- friendly weave through the play area. There are new swings with adapted seating and two new sandboxes, one raised off the ground so kids in walkers and wheelchairs can sift and dig too, and special seating in the box for children who need extra support. There’s a barrier-free playhouse and an accessible garden with flowering plants designed to attract birds, where kids can touch and taste and plant pumpkins and flowers for



DANA JOHNSON

Daniel Waggoner (left) and Yu Jin Oh play on the new playground equipment at the Susan Gray School.

Mother’s Day and other holidays. Play panels are interspersed throughout to draw kids’ attention to the other adventures. Some equipment has been renovated, and access ramps have been added to existing structures. And that’s just Phase One of the dream.

“The playground really represents what’s so important about development,” says Kennedy Center Director Pat R. Levitt, Ph.D. “Positive experiences drive the biological process of behavioral, brain, social and emotional development. The design of that playground provides equivalent access, so you don’t have some children sitting on the side frustrated because they can only do one out of seven activities. Over time, that can have adverse effects, from constantly feeling on the outside and isolated, from not being able to participate.”

The idea for modernizing the playground originated with Robb Swaney, a local architect and designer, who approached the school about a

continued on page 32



The first-year CRS scholars are, from left to right, Edwin Kwon, Purvi Shah, Roy Barco, Claire Turchi and Timothy Lautz. Not pictured is Amanda Ackermann.



Dr. Mona Sadek, one of two Canby Robinson Society Scholars in the Class of 1994, has been busy since she graduated from Vanderbilt University School of Medicine. She was an ob/gyn resident at Johns Hopkins from 1994 to 1998, and married a fellow physician, Dr. Ray Habib. She went from a group ob/gyn practice to a solo practice, has a son, Daniel, and is expecting her second child.

Sadek and her family live in Roanoke, Va.

"I never had any intention of leaving Vanderbilt. I actually went to Hopkins with misgivings. We were encouraged to expand our horizons and that's what I did, but I have nothing but good memories of Vanderbilt."

Sadek said she is deeply appreciative of the CRS scholarship.

"The scholarship enabled me to leave a program without being \$150,000-\$200,000 in debt. That changes what you can start out doing."



Dr. Mona Sadek and Daniel

Sadek said her practice is very busy because female ob/gyns are in demand.

"I wanted a solo practice. When you're in a group with 12 physicians, a patient never knows who's going to deliver her. My practice has grown very quickly. I had good training," she said. "By the way, I'm looking for a partner if anybody's interested." **CRS**

- NANCY HUMPHREY

Playground (cont.)

way to honor the late Keith Crabtree, a dedicated high school student and Susan Gray volunteer. Crabtree had selflessly devoted two of his summers to the program.

What began as a financial contribution by the Swaney family evolved into Swaney drawing up the plans, extensively researching ADA and other safety requirements, and tirelessly and enthusiastically overseeing the entire design and construction effort. Coupled with a \$75,000 donation by Sam and Linda Brooks, proceeds from the Junior League's annual Cinco de Mayo fundraiser, generous financial gifts from Brenda Crabtree, Steve Dawson and other friends of the Susan Gray School, and a final \$25,000 from Mr. and Mrs. Bud Adams and the Tennessee Titans, the blueprints finally became reality.

Phase Two is in the early planning stages. Plans include a possible water play playground for the older kids to enjoy, spraying fountains, and a picnic area on raised decking for expansive outdoor art activities, family events, and picnics.

Levitt said he makes a point of entering the Kennedy Center from the first floor, so he can get a glimpse of childhood fun before settling into the adult demands of his job. He even tries to schedule meetings at his office, with the playground in the background, to encourage his colleagues to lighten up, and remember what's really important.

"On a personal level, there's something really grounding about coming into your office every day, hearing children's laughter and play, and seeing the progress that any child makes over time."

CRS - NED ANDREW SOLOMON

GEORGE W. HOLCOMB JR., M.D.
*Executive Director
 Medical Alumni Affairs*



alumni journal

MEDICAL SCHOOL CLASS OF 2006 WELCOMED

As late August arrived, so did 104 members of the first-year medical class. This group of energetic and aspiring physicians were carefully selected not only for their academic and scientific achievements in undergraduate school, but also for their keen interests in broad social issues. In addition, they exhibit a deep desire and commitment to improve the general health of our citizens through medical care or research activity.

Twenty members of this class are native Tennesseans, the others come from 33 different states, and 44 percent are women. The group attended 57 different colleges and universities. The average medical college admission test score for these students is a remarkable 11.2, and their grade point average a high 3.78. We will certainly follow their careers with great interest.

LINGERING MEMORIES OF MEDICAL REUNION 2002

Medical Reunion 2002 in late October was a huge success. More than 700 alums and guests eagerly greeted old friends and visibly admired new buildings at the Medical Center which many had not seen before.

Vice Chancellor Harry R. Jacobson welcomed the 20 returning classes and presented plans for shaping the future of this medical center. Dean Steven G. Gabbe out-

lined future goals for the medical school, and Associate Vice Chancellor John E. Chapman expressed his vision of things to come for the alumni association. Later that morning, graduates of 1952 and 1953 were awarded their Quinq pins and certificates at a special ceremony with spouses and good friends in attendance. Vanderbilt's internationally-recognized staff discussed recent advances in management of diabetes, epilepsy, HIV-AIDS, and physician burnout.

Attendees also enjoyed several social events. A number of golfers joined Dr. Jacobson for a golf outing. Alumni and guests attended the gala dinner/dance Friday evening featuring Sam Levine's orchestra at Vanderbilt Loew's Hotel. Later that evening, President Joe F. Arterberry, M.D. ('76), transferred the alumni association gavel to the new president, Lawrence K. Wolfe, M.D. ('60), who will serve for two years. We are grateful for the outstanding leadership provided by Dr. Arterberry, and our best wishes for the future go with him and Kathryn.

On Saturday afternoon, the Commodores and the University of Connecticut Huskies fought an exciting football game. That evening's celebrations included traditional class parties at various locations.


MEDICAL ALUMNI TRAVEL PLANS

Arrangements have been made for our alumni to travel as a group to the Tuscany

area of Italy June 25-July 3, 2003 for a price of \$2595. Detailed information has been sent describing this visit to the ancient Etruscan cities of Cortona, Siena, Perugia, Assisi, and Florence, with an optional extension to Rome. We hope many of you will take advantage of this contemporary view of Italy and invite your friends to accompany you on this excursion. Later in the summer, we will join the undergraduate Vanderbilt alumni association on a visit to Scandinavia. You will receive more details about this later.

FAREWELL TIME HAS ARRIVED

It is with immense regret that I announce my retirement as Medical Alumni Director. The years are fast passing me by, and recently I celebrated my 80th birthday. It has certainly been a joy and a privilege to serve in this capacity for nine years and to be associated with so many loyal supporters of this Medical School and its Alumni Association. Associate Vice Chancellor for Alumni Affairs, Dr. John E. Chapman, will continue to serve in his office and will provide future communications to you, including this alumni letter.

I am convinced that the future of this medical school is assured, being blessed by its outstanding leadership at each level. Our future direction in the words of former Vice Chancellor Ike Robinson, who always urged "onward and upward," is exactly where we are now headed. 

Best wishes to all.

George W. Holcomb, Jr., M.D.
*Executive Director
 Medical Alumni Affairs*

Faculty News • Alumni News

Faculty News

***Dr. Lonnie S. Burnett**, Frances and John C. Burch Professor of Obstetrics and Gynecology, was one of six American College of Obstetricians and Gynecologists (ACOG) fellows honored with the Outstanding District Service Award. The awards, presented at the ACOG annual clinical meeting in Los Angeles, are given to individuals who have made significant contributions to their district. He was recognized for his dedication to teaching. He was also honored with an Excellence in Teaching Award from the Association of Professors of Gynecology and Obstetrics in 2001. He has served as vice chair and chair of the Tennessee section and also chaired ACOG's Committee on Education. He is currently the District VII Junior Fellow Advisor.

***Dr. P. David Charles**, assistant professor of Neurology, recently testified in front of the Senate Health, Education, Labor, and Pensions Subcommittee on Public Health about protections for human research subjects. He testified on behalf of the National Alliance of Medical Researchers and Teaching Physicians and outlined the Alliance's support for a comprehensive and uniform set of federal protections; strong, informed, and independent oversight by IRBs; effective privacy protections that do not prevent important archival research; and strong guidelines governing conflicts of interest that require full disclosure of such arrangements. The subcommittee is chaired by Sen. Edward Kennedy (D-Mass.). Sen. Bill Frist (R-Tenn.) is the subcommittee's ranking member.

***Dr. Deborah C. German**, senior associate dean for Medical Education, has been named president and CEO of Saint Thomas Hospital, and senior vice president and chief academic officer for the Saint Thomas Health Services system. She assumes the position Dec. 1.

Dr. James Goldenring has joined Vanderbilt University Medical Center in the newly created role of vice chairman for Research of the Section of Surgical Sciences. Goldenring, who comes from the Medical College of Georgia, will oversee the growing research in the Section, collaborate on new initiatives, sharpen the focus of resident development and will continue his own work in epithelial cell biology as the Paul W. Sanger Chair Professor of Experimental Surgery.

Dr. William M. Grady, assistant professor of Medicine, was selected to receive a Damon Runyon-Lilly Clinical Investigator Award at the Foundation's May 2002 selection meeting. The program was established to address the national shortage of clinical investigators available to translate scientific breakthroughs into new patient treatments. Grady is one of five recipients of the prestigious \$1.2 million award, selected from a pool of 32 applicants. The award includes retiring up to \$100,000 of any medical school debt still owed by the awardee. Funding for Grady's research on "Novel molecular screening and surveillance methods for colorectal cancer" at VUMC began on July 1.

Dr. Mark A. Magnuson, assistant vice chancellor for Research, has accepted a new responsibility as associate director for shared resources in the Vanderbilt-Ingram Cancer Center. Magnuson will oversee the shared resources that support the cancer center's basic laboratory research.

***Dr. Robert H. Ossoff**, Guy M. Maness Professor of Otolaryngology and chair of the department, associate vice chancellor for Health Affairs, and director of the Vanderbilt Bill Wilkerson Center, has been elected vice president of the Southern Section of the Triological Society (The American Laryngological, Rhinological, and Otological Society, Inc.) Ossoff will preside over the 2003 annual meeting of the organization in January.

Dr. David L. Page, HS'66, FA'72-, professor of Pathology, gave the Gordon R. Henniger Memorial Lecture at the South Carolina Society of Pathology Annual Meeting in Asheville, N.C. Dr. Samuel Dement, MD'82, assistant clinical professor of Pathology, presented the plaque and honorarium check. Dement is president of the South Carolina Society of Pathologists.

***Dr. Henry P. Pendergrass**, professor of Radiology and Radiological Sciences, Emeritus, received the American College of Radiology Gold Medal in October at the ACR annual meeting in Miami. Pendergrass has been at Vanderbilt since 1976

Dr. Rose Marie Robertson has been named one of the 21 leaders of the 21st Century by Women's Enews. She is also past president of the American Heart Association and the director of the Vanderbilt

Women's Heart Institute. Enews, an independent news service covering issues of interest to women, selected the women from hundreds of nominees who represented hope, justice and equity and who have made extraordinary contributions on behalf of women. Robertson, one of two health activists honored, was recognized in May for her role as a national spokesperson for women's cardiovascular issues.

Dr. Jeffrey R. Smith received a 2001 Presidential Early Career Award for Scientists and Engineers. Smith, assistant professor of Medicine and Cancer Biology, received the award in a White House ceremony. The Presidential Award – established by former President Bill Clinton in 1996 – is the highest honor given by the U.S. government to scientists and engineers early in their independent research careers. Smith, who was nominated by the Department of Veterans Affairs, was one of 60 investigators to receive the award this year. Smith received the award in recognition of his research related to the molecular genetics of prostate cancer.

***Dr. Kurt P. Spindler**, associate professor and vice chairman of Orthopaedics and Rehabilitation, has been awarded a three-year \$149,000 OREF grant. Spindler submitted the proposal titled, "Cohort Evaluation Natural History of 1059 ACL Reconstructions: Evaluation of Intra-articular Injuries as Predictors of Function and Arthritis at Minimum Five Years from Prospective ACL Database." Spindler was honored with the grant at the AAOS meeting in Dallas

Grant R. Wilkinson, Ph.D., professor of Pharmacology, returned to his alma mater in July to accept the esteemed D.Sc. degree from the University of Manchester. Conferred in recognition of "published work of high distinction," the D.Sc. degree is awarded by the University of Manchester only to former graduates or affiliates. According to Manchester's specifications, the published work must reflect research that "constitutes a substantial, sustained, and original contribution to science or engineering, and has established the candidate's authoritative standing in his/her subject." The meritorious degree mirrors the salute made recently by ISI Citations, which named Wilkinson one of its top 100 Highly Cited scientists for his work over the past 20 years in the area of pharmacology.

Alumni News

'38

Dr. William Derrel Hazlehurst, MD'38, F'40, practiced internal medicine in Macon, Ga. from 1947 until Jan. 1, 1991. He has three children, six grandchildren and one great granddaughter and would love to hear from his classmates from 1938.

'39

***Dr. E.S.C. Ford**, MD'39, retired from 53 years of practicing psychiatry in May 1992. Three years after graduating on alumni lawn with the magnolia in full bloom, he became the first flight surgeon in the eighth Air Force in England in May 1942. After retirement, he and his wife, Joanne, have spent time at their home in Hawaii and his permanent home in Mukilteo, Wash. They enjoy tennis and gardening, especially roses.

'51

Dr. Arthur C. Watson Jr., HS'53, spends his time traveling, playing duplicate bridge, participating in live theater and exercising. Two granddaughters graduated from Vanderbilt, Kristen Gerdelman, in 2002 and Brenna Gerdelman, who completed her first year of ob/gyn residency at Vanderbilt in 2002.

'53

***Dr. Judson G. Randolph**, MD'53, HS'54 has been honored by the Children's Hospital Foundation with the establishment of The Judson G. Randolph Fellowship in Pediatric Surgery at the National Children's Medical Center. Friends and patrons of the medical center raised money for the fellowship. Randolph is professor emeritus of Surgery at George Washington University in Washington, D.C.

'59

***Dr. Robert K. Dorton**, MD'59, retired from the full-time practice of internal medicine but is working part-time teaching clinical internal medicine at St. Louis University School of Medicine.

'60

Dr. Lawrence H. (Larry) Parrott, HS'60-'61, has retired and is now a volunteer teacher at the Medical University of South Carolina and the University of South Carolina. He enjoys his three children, two grandchildren, foxhunting on horseback and golf.

'64

Dr. Ralph C. Gordon, MD'64, is now emeritus professor of Pediatrics at Michigan State University. He is an adjunct professor and teaches medical history and African-American History (race and medicine) at Western Michigan University.

'65

Dr. Robert M. Carey, MD'65, F'70-'71, has completed a successful 16-year term as Dean of the University of Virginia School of Medicine. He has been appointed a university professor and will continue full-time in endocrinology and in hypertension research in the Department of Medicine. Carey was honored by the Vanderbilt Medical Alumni Association in 1994 with the Distinguished Alumnus Award.

'75

***Dr. Harold Erath Jr.**, MD'75, HS'75-'82, F'77, has been named professor of clinical surgery at Tulane University School of Medicine. Erath was chief resident surgeon in cardiac and thoracic surgery at Vanderbilt. Prior to joining the faculty at Tulane, he was in private practice of cardiovascular and thoracic surgery in Birmingham, and then in Opelika, Ala.

'78

***Dr. Stephen L. Jones**, MD'78, is the new medical commander at Ft. Campbell in Ft. Campbell, Ky. Prior to his appointment at Ft. Campbell, Jones was a cardiologist with the U.S. Army at Walter Reed Army Medical Center in Washington, D.C.

'82

Dr. Chris Cates, HS'82-'84, F'86-'88, chaired the 11th annual "Strategies for Success" symposium in June on Paradise Island in the Bahamas. Cates, founder and chairman of the only major national forum for exchanging ideas specific to the business of cardiovascular medicine, joined with the American College of Cardiology to present the symposium.

Dr. Andre M. (Mark) Durand, MD'82, left his position as medical director of the Blount Memorial Good Samaritan Clinic to work with a post-graduate training program for indigenous primary care physicians in community health in Palau, southeast of the Philippines. He spent the first half of the 1990s in the Pacific in the Mariana Islands. From 1990 to 1993 he was the only physician providing emergency, inpatient, obstetric and outpatient care for 3,000 island residents at the Rota Health Center on Rota Island in the Marianas. From 1993 to 1995 he was medical director with the Division of Public Health of the Commonwealth of the North Mariana Islands. Prior to that, from 1987-1988, he was medical director for the Sudan programs of the International Rescue Committee, where he supervised a staff of 200 in providing primary care for 40,000 Ethiopian refugees living in six local settlements.

Dr. Barry Fox, MD'82, recently returned to academic medicine. He joined the faculty at the University of Wisconsin as a clinical associate professor of Medicine in the Division of Infectious Diseases.

'83

Dr. Neil G. Feinglass, MD'83, is chief of the section of Cardiac Anesthesia at the Mayo Clinic, Jacksonville. He has been appointed to lead Hospital Automation for the development and deployment of Electronic Medical Systems.

'84

Dr. David J. Tolner, FA'84-'86, has been elected president of the Medical Staff for North Arundel Hospital in Glen Burnie, Md. He is instructor in Neurosurgery at Johns Hopkins Hospital and Assistant Clinical Professor for Neurosurgery for the University of Maryland. He, his wife and two daughters live in Pasadena, Md.

'86

Dr. Jeffrey R. Prinsell, MD'86, published a 100 percent success rate of Maxillomandibular Advancement Surgery in a site-specific approach for obstructive sleep apnea in 50 consecutive patients in a five-year, 18-center study in *Chest*, Vol. 116, No. 6, pp. 1519-1529.

'90

***Dr. Mark McIlwain**, MD'90, is chief of staff at Helen Keller Hospital in Sheffield, Al. He and his wife, Connie, have two children, Mary Ellen, 11, and Joe, 7.

'93

Dr. Gregory S. Henderson, MD'93, recently wrote a book on the Human Papillomavirus. He explores the link between the HPV virus and cervical cancer. The book, entitled "Women at Risk: the HPV Epidemic and Your Cervical Health" was published in May 2002 by Penguin Putnam and can be found at most major bookstores, and on amazon.com. Henderson is a National Institute of Health Medical Scientist Training Program fellow and is director of the women's diagnostic division of the Wilmington Pathology Associates in Wilmington, N.C.

Dr. Deanna Rose Lee Yen, MD'93, has been in full-time private pediatric practice since 1996 in Knoxville. She is also an internationally-certified lactation consultant. She and her husband have a 4-year old daughter, Rachel, and two golden retrievers.

'98

Dr. Robert Witherspoon Lowe III, MD'98, married Angela L. Schneider at St. Paul's Episcopal Church in Cleveland Heights, Ohio. Lowe is currently a resident physician in orthopaedic surgery at Case Western Reserve Hospital.

'00

Dr. Ishrat Ansari, F'00, is currently practicing internal medicine in a group practice in Murfreesboro, Tenn.

In Memoriam



Dr. Robert Hart Chappell, MD'40, died June 1 in Tulsa, Okla. He was 89. He established a private pathology practice in Texarkana, Texas, from 1950-81. He and his family also lived in South India where he taught at Vellore Christian Medical School and Hospital as a Methodist missionary. He also did short-term medical missionary service at the Mennonite Hospital in Hualien, Taiwan and for the Baptist board in Dominica. From 1951 until his mandatory retirement at the age of 70 in 1984, he was a pathologist at the City of Faith and taught at ORU Medical School. Survivors include his wife of 53 years, Billie; and children, Thomas, David and Susan; and seven grandchildren.

Dr. Joseph K. David Jr., HS'41-'44, died in Jacksonville on Aug. 1 from injuries suffered in a fall. He was 86. David had a private practice in San Marco from 1947 until 1988, and was a clinical professor of Pediatrics at the University of Florida for decades. In the early 1950s he established the first sickle cell anemia clinic in Jacksonville. David was honored by Jacksonville in 1980 for his non-auto commuting. He rode his bicycle to work, about an hour each way, for 10 years.

Dr. Gilbert F. Douglas Jr., MD'40, died on Feb. 28. He was 87. Douglas practiced internal medicine in Birmingham and Vestavia Hills for more than 50 years. He served on the medical staffs of South Highland (now Health South) Brookwood Medical Center and UAB. He is survived by his wife of 55 years, Sarah; two sons, Gilbert III and Herbert; four daughters, Sarah, Mary, Alma and Dorothy; 19 grandchildren; and one great granddaughter.

Dr. Ray Leonard Dubuisson, MD'50, HS'51-'55, assistant clinical professor of Pediatrics, died on May 27. He was 82. He practiced pediatrics and family medicine for 45 years in Nashville and founded Green Hills Children's Clinic. He is survived by his wife, Ida Mae; three children, Robert, Donald and Janet, and five grandchildren.

Dr. James Thomas Gilbert Jr., MD'34, died on Nov. 8, 2001 in Bowling Green, Ky. The Paducah native was co-founder of Graves-Gilbert Clinic in Bowling Green. He is survived by his wife, Amanda Jane; two sons, James III and Harry; seven grandchildren; and five great-grandchildren.

Dr. Joseph Cullen Hall, MD'42, died June 17. He was 88. Hall began practice as an ob/gyn in Salisbury, N.C. on May 15, 1948 and retired Sept. 30, 1982. He joined the medical staff of Rowan Memorial Hospital in 1948 and was chief of staff of the hospital. He is survived by his wife of 59 years,

Catherine; two sons, Joseph Jr. and William; daughters, Martha and Patricia; and six grandchildren.

Dr. Orrin L. Jones Jr., MD'54, died June 14 in Nashville. He was 73. He was a founder of Donelson Hospital and served as chief of staff and delivered the hospital's first baby. During his medical career, he delivered over 10,000 babies. He is survived by his wife, Roberta; three children, Dr. Leslie Jones Cargile, David, and Stephen; and six grandchildren.

Dr. William G. Kennon Jr., HS'41-'42, clinical professor of Otolaryngology, emeritus, died Sept. 1 in Nashville. He was 86. He practiced otolaryngology in Nashville with Drs. Eugene Orr and J. Thomas Bryan and was one of the first physicians to use a surgical procedure called stapes mobilization to correct conductive deafness. He is survived by his wife, Carolyn; two sons, Col. William G. Kennon III and Beverly Randolph Kennon; a daughter, Carol K. Dick; and seven grandchildren.

Dr. Lawrence H. Lassiter, MD'52, died Feb. 7 in Chattanooga from Non-Hodgkin's Lymphoma. He was 77. He was the founder of Miller Eye Center and the Lawrence H. Lassiter Eye Clinic at Erlanger Hospital. He began his practice in the Chicago area, after completing his residency in ophthalmology at the University of Illinois Eye and Ear Infirmary, but returned to the Chattanooga area in 1960 where he had a private practice of ophthalmology and continued to practice for over 40 years. The Miller Eye Center became the home of the University of Tennessee's ophthalmology residency program where he taught generations of residents and where he received the first L.H. Lassiter Award. The award is now given every three to four years to honor an outstanding ophthalmology resident.

Dr. Raymond H.C. Meng, FA'51-'00, professor of Molecular Physiology and Biophysics, emeritus and professor of Surgery, emeritus, died May 12. He was 84. Meng's pioneering research helped develop the field of parenteral nutrition. In 1961 and 62 he served as a John Simon Guggenheim Fellow at the Karolinska Institute in Stockholm. In 1966 he founded the International Society of Parenteral Nutrition. He was a member of several advisory committees for the Office of the Surgeon General, the American Medical Association and the National Science Council and was given awards by the AMA and American Chinese Medical Society for research achievement. He is survived by his wife, Cecilia and their children, Brita, Erika, and Henrik.

Dr. Thaddeus M. Moseley III, MD'43, HS'43, '46-'49, died July 29 of cancer. He was 83. He moved to Jacksonville in 1950 to establish his practice at Riverside Hospital and Clinic. He also began teaching at the old Duval Medical Center, now Shands

Jacksonville. He was instrumental in establishing a full-time teaching faculty at the hospital and worked toward its affiliation with the University of Florida College of Medicine. He is survived by his wife of 54 years, Linda; children, Thad, William and Stacy; and five grandchildren.

Dr. James M. Phythyon, HS'54-'57, '74-'75, FA'76-'85, died May 20 of chronic pulmonary disease. He was an associate clinical professor of anesthesiology. He is survived by his wife, Marlin, and three daughters.

Dr. Charles W. Quimby Jr., FA'73-'89, died June 29 in Nashville. An anesthesiologist at VUMC, he is survived by his wife, Lois.

Jay W. Sanders, Ph.D., FA'64-'00, died June 21. He was 77. Sanders was professor emeritus in Audiology. He is survived by his wife, Mary (Kitty); children, Mary, Elizabeth and John; four grandsons; and a great granddaughter.

Dr. Leo Schwartz, MD'26, died March 28 at his home in Sarasota, Fla. He was 87. He practiced medicine in Manhattan for more than 40 years. He was president of the medical board of the Manhattan Eye, Ear and Throat Hospital and was chief of staff at Doctors Hospital and Roosevelt Hospital, among others. He is survived by a son, Roger, and four grandchildren.

Dr. William P. Stone, MD'34, died Dec. 15, 2001 at his home in Springfield, Tenn. He was 91. He practiced medicine from 1935 until his retirement in 1974. Survivors include two sons, Dr. William Stone Jr., MD'60, of Decatur and Dr. Eugene Stone of Alexandria, Va., three granddaughters and four great-granddaughters.

Dr. Donald G. Strole, MD'43, died May 13 in Abilene, Texas. He practiced internal medicine in Abilene for over 46 years at Hendrick Medical Center. He is survived by a son, Gordon, two stepchildren and two granddaughters.

Dr. Stephen S. Thurman, MD, HS'69-70, died March 16 from pancreatic cancer. He was 57. He was on the active medical staffs of Baptist, Donelson and Memorial Hospitals in Nashville and Henry County Medical Center in Paris, Tenn. He is survived by his wife, Donna.

Dr. David H. Waller, MD'70, died July 14 at his home in Friendsville, Tenn. He was 57. Waller served as secretary, vice chief and chief of the department of ob/gyn at Baptist Hospital in Knoxville.



Dr. David Holt, MD'82, looks at a photo collage during Vanderbilt Medical Alumni Reunion.



Quinqs from the Class of 1952



Quinqs from the Class of 1953

REUNION

Photos by Dana Johnson



Dean Steven Gabbe welcomes Dr. Phyllis Corbitt, MD'52, into the Quinq Society.



Members of the class of 1953 including, left to right, Drs. Charles Branch, Donald Bryan, Oscar Conner, Joe Cromeans and William Edwards cheer for their classmates as they are inducted into the Medical Quinq Society.

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