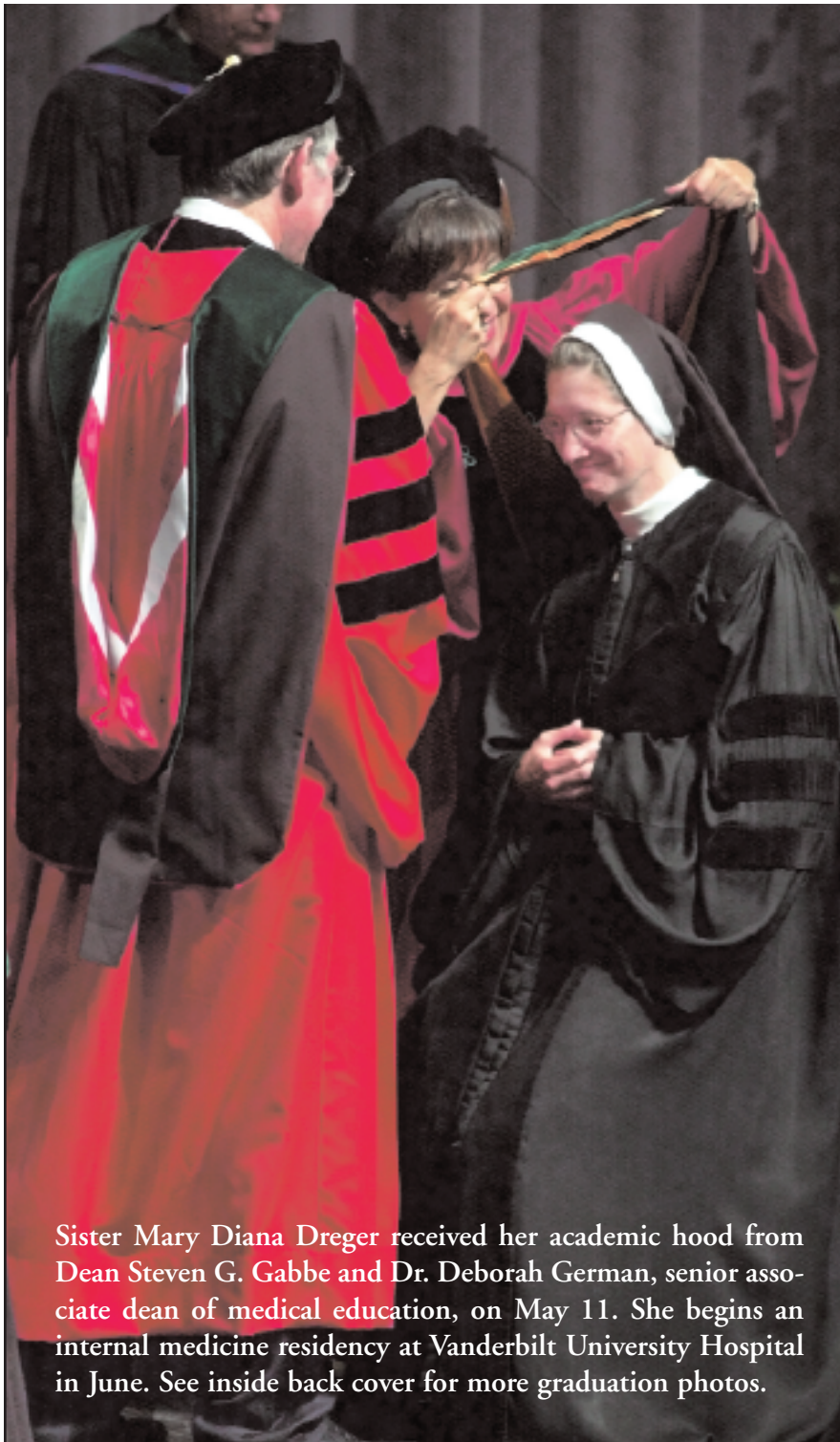


Vanderbilt Medicine

**THE
WAR
AGAINST DIABETES**

M.D. Sister



Sister Mary Diana Dreger received her academic hood from Dean Steven G. Gabbe and Dr. Deborah German, senior associate dean of medical education, on May 11. She begins an internal medicine residency at Vanderbilt University Hospital in June. See inside back cover for more graduation photos.

MARK HUMPHREY/AP

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A SURREAL
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diabetes... the single fastest growing disease in the United States, is a killer. It does so slowly, relentlessly and at great cost. The disease effects an alarming 6.9% of all adults, yet it accounts for almost 20% of all health-care costs. And the impact of the disease grows greater each year as our population ages and becomes increasingly overweight. By 2012, the incidence of the disease will double. It is a vicious disease that requires constant attention from the person it afflicts. Heart disease, blindness, kidney failure and amputation are often the only "rewards" for fighting a decades-long battle with this disease.

Diabetes: the slow, relentless killer

We devote almost the entire summer edition of *Vanderbilt Medicine* to studying the disease and showcasing Vanderbilt's sweeping contributions to solving its many puzzles. In 1921, Frederick Banting isolated insulin and showed that people with diabetes suffered from a dramatic deficiency of insulin that triggered their disease and caused them to die within months of the onset of symptoms. The discovery of insulin made it possible for these patients to survive.

The second great breakthrough came in a study led by Vanderbilt's Dr. Oscar Crofford. The Diabetes Control and Complications Trial, the DCCT, took a long-range view to see how patients' lives and health could be influenced by aggressive day-to-day management of blood glucose over a 10-year period. The results of that study form today's standard of care emphasizing rigorous control of glucose levels. Vanderbilt was awarded the first

NIH Diabetes Center grant in 1973 and remains one of only 14 such centers in the country. Vanderbilt is lucky indeed to have Dr. Darryl Granner as director of the center.

From the days of Oscar Crofford on, Vanderbilt has nurtured some of the top diabetes researchers in the world. Two of our faculty, Drs. Alan Cherrington and Rollo Park have been awarded the Banting Prize, the highest accolade for any researcher in diabetes. Our two Nobel laureates, Earl Sutherland and Stanley Cohen,

both worked on research related to insulin and hormone action. Rollo Park and our newest member of the National Academy of Science, Dr. John Exton, both made landmark discoveries in glucose metabolism. Alan Cherrington's work in the hormonal control of glucose production formed the basis for his Banting Award.

The future of research in diabetes is extraordinarily exciting. Islet cell transplants hold real promise for patients with type 1 diabetes. The discovery of genes that regulate glucose levels in the blood give us the platform to define gene variations that cause and can be used in early diagnosis of the disease. The isolation of proteins that retard glucose regulation and also promote atherosclerosis affords us some targets for development of designer proteins to stop or delay the progression of type 2 diabetes. Our growing understanding of the factors that contribute to higher



DEAN DIXON

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

incidence of diabetes among Native and African Americans, give us insight into the behavioral, cultural and genetic variables that contribute to this disease.

Our exploration of diabetes comes at a time when the tools of discovery have taken a quantum leap forward. The mapping of the human genome will help us isolate those genes that influence the production of insulin, measurement of blood

glucose and absorption of glucose by cells. The development of sophisticated genetic "models" of diabetes in mice and the precise instruments for measuring physiologic changes non-invasively make it possible to propose and test hypotheses quickly and accurately. Our imaging technologies from PET Scan to x-ray crystallography give us tools that make discovery faster, more predictable and more rational.

Understanding the delicate and complex molecular choreography of the liver and pancreas, insulin and glucose and proteins and receptors is our challenge. This decade may be among the most productive in history, and we might – if we're lucky – produce a better world and a brighter future for the 16 million Americans battling diabetes every day and the 16 million more who just don't know they have it. And if we work very hard, Vanderbilt should play an important role. **V**



Drug tested at VUMC first to treat sepsis



After six years of research here, Vanderbilt University Medical Center stands poised as the international clinical coordinating center for the first drug proven to reduce deaths due to sepsis, an infection process that claims more than 250,000 lives a year in the U.S. alone.

As reported in the March 8, 2001 issue of *The New England Journal of Medicine*, in clinical trials that concluded in June 2000, the drug, Zovant TM, (recombinant human activated protein C), was shown to reduce overall mortality by almost 20 percent. The study, sponsored by APC manufacturer Ely Lilly, was conducted at Vanderbilt and 163 other medical centers in 11 countries.

"This is really a breakthrough. There are no other drugs of this type that show such a decrease in mortality," said Dr. Gordon R. Bernard, professor of Medicine and associate director of Allergy and Pulmonary Critical Care Medicine. Bernard, who presented the findings of the study at a Feb. 11 meeting of the Society of Critical Care Medicine, lists the introduction of APC with the practice of sterile techniques and the discovery of antibiotics as a milestone in infection management.

"Now we've gone from just treating an infection to treating the severe organ and other tissue damage that occurs during the severe sepsis process," he said. "This is the first drug that deals directly with this huge clinical problem."

Bernard led phase II trials of the drug at

Vanderbilt beginning in 1994 when Lilly approached him with the potentially life-saving drug. In 1998 trials expanded, with VUMC continuing to be the international coordinating center. "The phase III trial was halted because of the profound effect on the decrease in mortality," Bernard said.

Protein C is naturally converted to activated protein C (APC) during severe bleeding and sepsis to prevent excess thrombosis, enhance fibrinolysis and decrease inflammation. "It's an anticoagulant with anti-inflammatory properties," Bernard said.

But when pneumonia, appendicitis or other infections lead to sepsis, APC is depleted. The body's response to the infection - to wall off the area with clots and produce inflammation - goes awry. Clots form indiscriminately and can choke otherwise uninfected and healthy tissue to death and leads to multi-organ failure.

Intensive care patients, those severely compromised, are constantly at risk of sepsis and medical efforts focus on preventing the disorder. In the double-blind, placebo-controlled trial, 31 percent of patients on placebo who acquired sepsis died; with Zovant TM, mortality fell by 20 to 25 percent.

"That may not sound like much, but of 250,000 deaths a year, that amounts to 50,000 lives saved a year in the U.S. alone," Bernard said. "That's roughly the number of people who die in motor vehicle accidents." - CLINTON COLMENARES

VUMC programs rank among best in nation

Vanderbilt University School of Medicine continues to excel as one of the premier medical institutions in the United States, according to a ranking released in April by U.S. News & World Report.

VUSM ranked 16th out of 125 accredited medical schools in the United States, ahead of Case Western Reserve University, University of Chicago, and Northwestern University. In 2000, VUSM also ranked 16th in the nation.

The national magazine's annual survey of graduate education programs weighs such factors as reputation, research activity, student selectivity and faculty resources. "We should be extremely proud of the ranking," said Dr. Steven G. Gabbe, dean of the School of Medicine. "This is a reflection of the efforts of our faculty, our students, and our academic leadership. Even though they have their faults, these rankings are used to assess quality of medical education by national organizations," he added.

In a separate listing that divided medical programs into fields of specialty, VUSM ranked second in Audiology, eighth in Speech-Language Pathology, and tied for 14th in Psychology.

The magazine also ranked the School of Nursing 27th, tied with Catholic University of America, Duke University, the University of Minnesota and the University of Utah. This is the fourth time U.S. News has ranked nursing programs. VUSM was rated among the nation's best each time.

In another publication, "Best Doctors Premier Hospital Network," VUMC received a high ranking among the hospitals in America who had the highest concentration of top doctors. Vanderbilt was one of only 28 hospitals across the country to achieve that distinction.

- JON COOMER



• oversee impact

Vanderbilt physicians teach,
learn in lives abroad



as

At Dr. Suzy Snyder's walk-in clinic, patients walk in, literally, for hours or even days. If there's a wait to be seen, they lie down under a tree in the yard and wait until the next morning.

Dr. John Tarpley's practice is an anachronism – no phones, no refrigeration, electricity only on erratic schedules. "It's like living in the South back in the 1940s," the surgeon said.

And some of Dr. Chris Greeley's colleagues say the way he learned to practice medicine can be, at times, obscene. "We have a lot of stuff," said Greeley, assistant professor of pediatrics. He's talking about American medical technology, which, to his fellow practitioners in Cambodia, where a CT scan costs one year's salary, seems opulent.

Snyder, Tarpley and Greeley all trained at Vanderbilt. They're all currently faculty physicians at Vanderbilt. But they cultivated their medical philosophies in countries far away from carpeted waiting rooms and high-tech imaging, and it's images from their overseas experiences that mold how they care for their patients back in Tennessee.

Snyder, who finished her medicine-pediatrics residency at Vanderbilt in 1991, has spent seven of the past 10 years as the only physician for 10,000 people in the middle of the Kenyan bush.

Tarpley, with undergraduate and medical degrees from Vanderbilt, has called Ogbomoso, Nigeria, "home" since 1978, rotating three year-stints with one back in the states. He's been at Vanderbilt since 1993, but spends two and a half weeks there each year and relishes the day he'll return for five to 10 years.

Greeley finished his pediatric residency at Vanderbilt in 1995. For each of the past five years he's spent one month overseas, most recently in Cambodia, treating patients and teaching other physicians.

These physicians have varying reasons for taking their medicine show on the road, but they boil down to a sense of filling a void, making a difference where the need is great. And there's a sense of challenge – medical and societal – that seems to be satisfied with their tours.

"The primary reason is because we feel like that's what God wants us to do," Snyder said. "We wouldn't be here otherwise – it's too hard."

After her residency, she and her husband, Dave Snyder, a minister who doubles as clinic administrator, signed up with Christian Missionary Fellowship, an international agency with 120 missionaries in 12 countries. In January 1992 they moved to the bush country of Kenya to live with the Masai tribe, a three-hour truck ride past lions, cheetahs and hyenas to the nearest town.

"Obviously, I'm not going to further a medical career," she said. "But these people are underserved. If we weren't there, they wouldn't receive care. I feel like we're meeting a real need. We've changed their standard of health. We've decreased infant mortality and the death rate."

After medical school, Tarpley left Nashville for Baltimore and training at Johns Hopkins. But before he left, his interest in missionary medicine grew throughout medical school. At a meeting of the Christian Medical Society his senior year someone brought to the meeting a letter to the "New England Journal of Medicine" written by a Nigerian missionary. It was 1970, while Vietnam was still raging, and racial tensions were still raw in much of the south.

"I thought the day of the white missionary was over," said Tarpley who grew up in Mississippi, the son of a Baptist minister. But the letter told physicians, "if you will come and help, you are welcome." And he wanted most to teach. "Hopkins had all the teachers they needed." So he and his wife signed up with the Foreign Mission Board of the Southern Baptist Convention and took their sons, then in first and second grades to Nigeria, now a "giant bush village" of about 600,000. Their third son was born there and bears an African name, Ayobami Abiodun Leeman Richardson Tarpley. "I call him Ayobami;

by Clinton Colmenares



DR. CHRISTOPHER GREELEY/
ENGOBO, SOUTH AFRICA

his mother calls him Leeman,” Tarpley said.

Greeley’s family lived in Hong Kong for four years when he was growing up. He traveled throughout Southeast Asia and was bitten by the travel bug. He tailored his profession to blend with his avocation. “I always wanted to practice overseas,” he said.

After a couple of years in practice, he got a call from Health Volunteers Overseas and accepted an assignment to the West Indies. He later went to South Africa and last November went to Cambodia, where he plans to return each year, at least for the foreseeable future.

“I guess it started a bleeding heart, altruistic sort of things,” he said. “Now, it’s one of those things I can’t see myself not doing.”

And regardless of where they practice, each physician gleans similar benefits. The patients, they say, are thankful and appreciative. There are no HMO battles, few, if any, malpractice suits. And they’re able to make a difference. They each leave something behind – a curriculum, medical books, mentorships with other physicians – to further compound their efforts. As Greeley says, they are “teaching them to fish,” instead of giving them a fish.

But they also bring back with them practical lessons that benefit Vanderbilt patients. Chief among them, a respect and controlled use of technology and medication.

“In the U.S., it’s full speed ahead and damn the torpedoes,” Greeley said.

Technology on the whole is a great advancement, Tarpley says. But his sentiments agree with Greeley’s. “We use the technology because we can. That’s not the best reason. The fear is that we are creating a generation of physicians who lack the basics of history and physical exams.”

Tarpley tells his students and colleagues in Africa, “What would we do at Vanderbilt? Now, what can we do?” The practice has to fit the technology.” And the converse is true in Nashville. “I ask resi-



HOME AWAY FROM HOME
Dr. Suzy Snyder, shown above with Dr. Bob Lougfield from San Antonio Texas Chest Hospital and, right, with a group of children in Kenya, practices medicine three hours from the nearest telephone.



dents, ‘If you did not have a CT, how would you manage this patient?’ CTs were not available before 1975,” Tarpley said.

In the bush, Snyder is three hours from the nearest telephone. There are no X-ray machines, not to mention advanced diagnostic tools such as echocardiograms or CTs. There are no sub-specialists to consult, no Internet or MedLine. An inpatient bed is the ground under a tree, the IV pole a sturdy branch. It’s a culture shock, she said, to come back to the United States.

But it satisfies something, a human basic need. “It’s fulfilling,” she said.

The Vanderbilt physicians have also gained a perspective on life not realized in the most advanced country in the world, by gaining a perspective on death.

In Africa and the West Indies, so many children die young that they are not named until weeks or even a year after birth. “Everyone knows someone whose child has died,” Greeley said.

In Nigeria, people “do a better job of seeing death as a part of life,” Tarpley said. “Here, the philosophy until recently has been a ‘do everything, spend all you can’ mentality.”

But as the U.S. population ages, the management of chronic illnesses becomes more of a concern, as well as death and dying issues. “The U.S. would do well to learn from cultures who rely more on their faith and nature, not just one’s technology. Because you can do something does not mean you should do something – like putting someone on a vent or commencing hemodialysis,” he said.

The physicians also challenge U.S. colleagues to take up the gauntlet. They each have taken at least one Vanderbilt student or faculty member with them. Greeley sees an advantage in Vanderbilt’s having a permanent presence in Cambodia. “Imagine a med student saying, ‘I’m going to take the Cambodia rotation,’” he said.

Snyder, who is working to make a trip to her village a fourth-year elective, says she takes the message directly to students and residents. “We have been given so much as Americans. I feel like it’s our responsibility to return some of that wealth. I ask them, ‘What kind of impact are you going to make with your practice?’”



Gass receives Helen Keller Prize

Dr. J. Donald M. Gass, professor of Ophthalmology and Visual Sciences, has been awarded one of Ophthalmology's most coveted prizes, the Helen Keller Prize for Vision Research.

The prize was created in 1994 by the Helen Keller Eye Research Foundation and honors the foremost figure in history to have overcome blindness. The prize selection committee includes scientists and research physicians who are leading figures in the international vision research community.

Gass, one of the world's most respected ophthalmologists and experts on diseases of the retina, macula and uvea, joins seven past Helen Keller Laureates. The dual winners of the 1996 prize were Nobel Prize winners Drs. David Hubel of Harvard Medical School and Torsten Wiesel of Rockefeller University.

Gass received the award at a special dinner in April at the annual convention of the

Association for Research in Vision and Ophthalmology (ARVO). Last year's winner was Harvard's John E. Dowling, Ph.D.

"Dr. Gass is considered a world authority on medical management of retinal disease and the sole leading authority on macular disease," said fellow faculty member Dr. John S. Penn, vice chair of Research and professor of Ophthalmology and Visual Sciences. "He wrote the atlas of macular disease. There is no other person in this business who has contributed more and who knows more about this area of ophthalmology.

"He is joining a small fraternity that is composed of the greatest minds in vision research," Penn said. "If one were charged with gathering a subset of the most outstanding contributors to the field, the Helen Keller Laureates would be the place to start. It is not just one more in the long list of Dr. Gass' career accolades, it is a

crowning achievement. We are proud to have him as a member of our faculty."

Gass said he is honored to receive an award named for Keller.

"It's always nice to get awards, but this one is particularly nice," he said. "I remember reading about Helen Keller in grammar school, even before I knew I wanted to be a doctor or an ophthalmologist. It was an inspiring tale of someone who was both blind and deaf, but who accomplished so much."

Gass joined the Vanderbilt faculty in 1995. He is a 1957 graduate of the Vanderbilt University School of Medicine and the class's Founder's Medalist.

- NANCY HUMPHREY



DEAN DIXON



Delirium studied in the ICU

incidence of delirium among elderly patients in the ICU.

Dr. E. Wesley Ely, assistant professor of Medicine, has been studying cognitive impairment in the ICU for the past two years. "We've been collaborating on this series of investigations with people from all over the country," he said. "It took a team of people with great expertise in a multitude of areas."

At Vanderbilt the group includes: Drs. Robert S. Dittus, director of general internal medicine; Gordon R. Bernard, in pulmonary and critical care medicine; Richard A. Margolin and Joseph Francis Jr., both experts in geriatric delirium; Alastair J.J. Wood in Pharmacology, Sharon Gordon, Ph.D., in Neuropsychology; Shiva Gautam, Ph.D. and Theodore Speroff, Ph.D., both biostatisticians; and Dr. Sharon K. Inouye, a geriatrician and delirium expert from Yale University.

The group has received a five-year

National Institutes of Health grant to study delirium in older people as well as The Beeson Scholarship, a coveted three-year grant from the American Federation of Aging Research. Both grants begin July 2001. The American Geriatrics Society has selected the project from a list of 500 as one of the top 30 research projects.

"Deciding how to handle these patients is an emerging issue in critical care medicine," Ely said. "Older people are going to the ICU and we wondered if the older brain is more susceptible to deficits and the presence of delirium and if the complication, once developed, predisposes this group of patients to more long-term neuropsychological deficits."

In the study, delirium was determined to be the strongest independent determinant of length of stay in the hospital, usually lasting from four to seven days.

- NANCY HUMPHREY

It's extremely common for older patients to experience delirium while in the Intensive Care Unit (ICU) on ventilators. About 90 percent of elderly patients in the ICU suffer from some degree of delirium.

A study at Vanderbilt University Medical Center found that delirium resulting in the ICU is the no. 1 predictor of length of stay in the hospital - a finding that has caused one VUMC physician to design a series of investigations and protocols with cohorts at Vanderbilt and across the country to find out what can be done to reduce the

Vanderbilt Medicine



THE WAR AGAINST DIABETES

The battle is intensifying. The troops are armed and ready.

As the incidence of diabetes in the United States escalates dramatically, the country's major medical centers are joining forces to try to cripple the dramatic increase of diabetes.

There are no longer clearly drawn lines about the age, sex or race of patients with the two major types of diabetes.

Historically, type 1 diabetes (formerly called juvenile diabetes) has been seen mainly in children and very young adults. Type 1 is an autoimmune disease in which the body does not produce insulin. It accounts for 5-10 percent of all cases of diabetes and is now frequently being diagnosed in middle-aged adults.

Type 2, known as adult-onset diabetes, is a metabolic disorder resulting from the body's inability to make enough, or properly use, insulin. It is the most common form of the disease, accounting for 90-95 percent of diabetes.

Type 2 diabetes is being called the next lifestyle epidemic to afflict the United States by the Centers for Disease Control, the lead federal agency for protecting the health and safety of people. As the population becomes

more overweight and sedentary, type 2 diabetes is becoming more common. In fact, about 80 percent of people with type 2 diabetes are overweight.

But type 2 isn't solely adult-onset anymore. Once rarely seen in children, endocrinologists and primary health care providers are seeing a new breed of patients – children with an "adult" form of diabetes.

"Type 2 diabetes in children is an emerging epidemic," said Dr. Arlan Rosenbloom, chairperson of an American Diabetes Association consensus panel in a report released last year. The experts concluded that type 2 diabetes is commonly occurring in children who are overweight, usually older than 10 years of age, members of certain ethnic groups and in those who may have a family history of diabetes. Type 2 had been rare in children, occurring in only one to two percent of children with diabetes. But recent reports show that 8 to 45 percent of children with newly diagnosed diabetes have, in fact, type 2 diabetes.

As the U.S. population becomes increasingly overweight, it is expected that type 2 diabetes may appear more

frequently in younger, pre-pubescent children. In fact, children as young as four are being diagnosed with type 2 diabetes.

"The epidemic of diabetes going on in this country right now is really serious and the projections are that we will have two times as many diabetics in 15 years," said Dr. Daryl K. Granner, Joe C. Davis Professor of Biomedical Science and director of the Vanderbilt Diabetes Center. "We're talking now about total related costs of nearly \$100 billion a year, about 15 percent of the health care budget. "Can you imagine doubling that in 15 years? It's an enormous problem."

Vanderbilt Medicine takes a look at how Vanderbilt is joining with other institutions and health care organizations in fighting this disease that has increased dramatically over the past four decades – from 1.6 million people in 1958 to more than 15 million today.

"There won't be a single reader who doesn't either have the disease or have a family member or close friend who has it," Granner said. "It's that widespread."

★ ★ ★ by Nancy Humphrey ★ ★ ★

a very complicated disease

by Nancy Humphrey

One of these days, not long from now, researchers and clinicians believe they will know what causes diabetes and how it can be prevented. But for now there are more American citizens with diabetes, particularly type 2 diabetes, than ever before.

Diabetes affects 15.7 million people and is believed to affect another 5.4 million people who are not aware they have the disease. Every day, 2,200 people are diagnosed with diabetes.

The Centers for Disease Control last year released information showing that the prevalence of diagnosed cases of diabetes increased by a one-third – from 4.9 to 6.5 percent between 1990 and 1998.

“Diabetes is a very complicated disease. It’s a multi-factorial disease that involves several genes and several environmental factors,” said Dr. Daryl K. Granner.

With patients who suffer from type 1 diabetes, where the body makes no insulin, researchers are working to find out how to prevent or forestall the destruction of beta cells, the insulin producing cells of the pancreas.

“It’s interesting to talk to the parents of a child with type 1 diabetes and find out how much it would have been worth to them, to even have one more year that their child didn’t have diabetes” Granner said. “You’re talking about a lifetime with a disease and it’s a very emotional thing for parents of children with diabetes. And if you could prevent it until they’re 13 or 15, it’s not ideal, but it would be better than what we can offer now.”

And for patients with type 2 diabetes, finding the cause of glucose intolerance or enabling a delay in onset might someday improve their lives.

“We know now, for example, that children who have both parents with diabetes have over a 50 percent chance of developing diabetes. Early on these people will have impaired glucose intolerance, but not all of

them will go on to develop diabetes. We’ve got to figure out who these people are and then determine if we are able to treat them and control their blood glucose, and if we can forestall the appearance of diabetes.

“This is a big deal. If you’re 20 years old, and have impaired glucose tolerance, your chances of developing diabetes are 5-to-6 fold increased. We know that the magnitude of the elevation of the blood sugar and the duration of time that the sugar is elevated are directly linked to the complications of diabetes. So if we can normalize the blood sugar for 20 years, we’ve done a lot. Maybe we haven’t stopped the ultimate appearance of the disease, but we’ve decreased the probability of developing complications and probably the severity of the complications.

Diabetes Facts

- Diabetes affects 15.7 million people or 5.9 percent of the population in the United States.
- There are two major types of diabetes: Type 1 is an auto-immune disorder in which the body does not produce any insulin. This occurs most often in children and young adults. Type 2 is a metabolic disorder resulting from the body’s inability to make enough, or properly use, insulin. It is the most common form of the disease, accounting for 90-95 percent of diabetes.
- Each day, approximately 2,200 people are diagnosed with diabetes.
- The life-threatening complications of diabetes include blindness, kidney disease, nerve disease, amputations, heart disease and stroke.
- Diabetes is one of the most costly health problems in America at about \$98 billion annually.
- Diabetes is more common among African-Americans, Latinos and Native Americans.

- AMERICAN DIABETES ASSOCIATION

A Surreal Experience

Dr. David J. Maron has always thought of himself as one of the healthiest people he knows. The Vanderbilt cardiologist practices what he preaches. He eats a low fat, low cholesterol diet. He exercises. His body is lean.

But more than a year ago, his image was blown to pieces. In his mid-40's, Maron was diagnosed with type 1 diabetes.

He had noticed episodes of unusual thirst and increased urination for several months, but believed both were due to a diuretic he had been taking while being treated with a steroid for a bout of tinnitus. His symptoms improved dramatically when he stopped the steroid medication, but they did not resolve entirely and persisted for several months. When friends and co-workers mentioned he looked like he had lost weight, he hadn't noticed. Before a workout at Vanderbilt's Dayani Human Performance Center, Maron weighed himself. He had dropped nearly 20 pounds.

A glucometer test revealed a glucose level of 200.

"It was a surreal experience," Maron said, adding that it is unusual to be diagnosed with type 1 at his age. Onset of type 1 is typically before the age of 30. People with type 1 diabetes make up less than five percent of all people with diabetes, said Dr. Alan L. Graber, professor of Medicine.

"I was totally devastated," Maron said. "I was the healthiest person I knew. As a cardiologist I see patients with terrible complications from diabetes – coronary artery disease, nephropathy, neuropathy, retinopathy. I immediately saw myself as having a disease that would shorten my life and cause horrible complications."

But with the help of a Vanderbilt endocrinologist and the guidance of Janie Lipps, R.N., a nurse practitioner for the Vanderbilt Diabetes Center, Maron began the

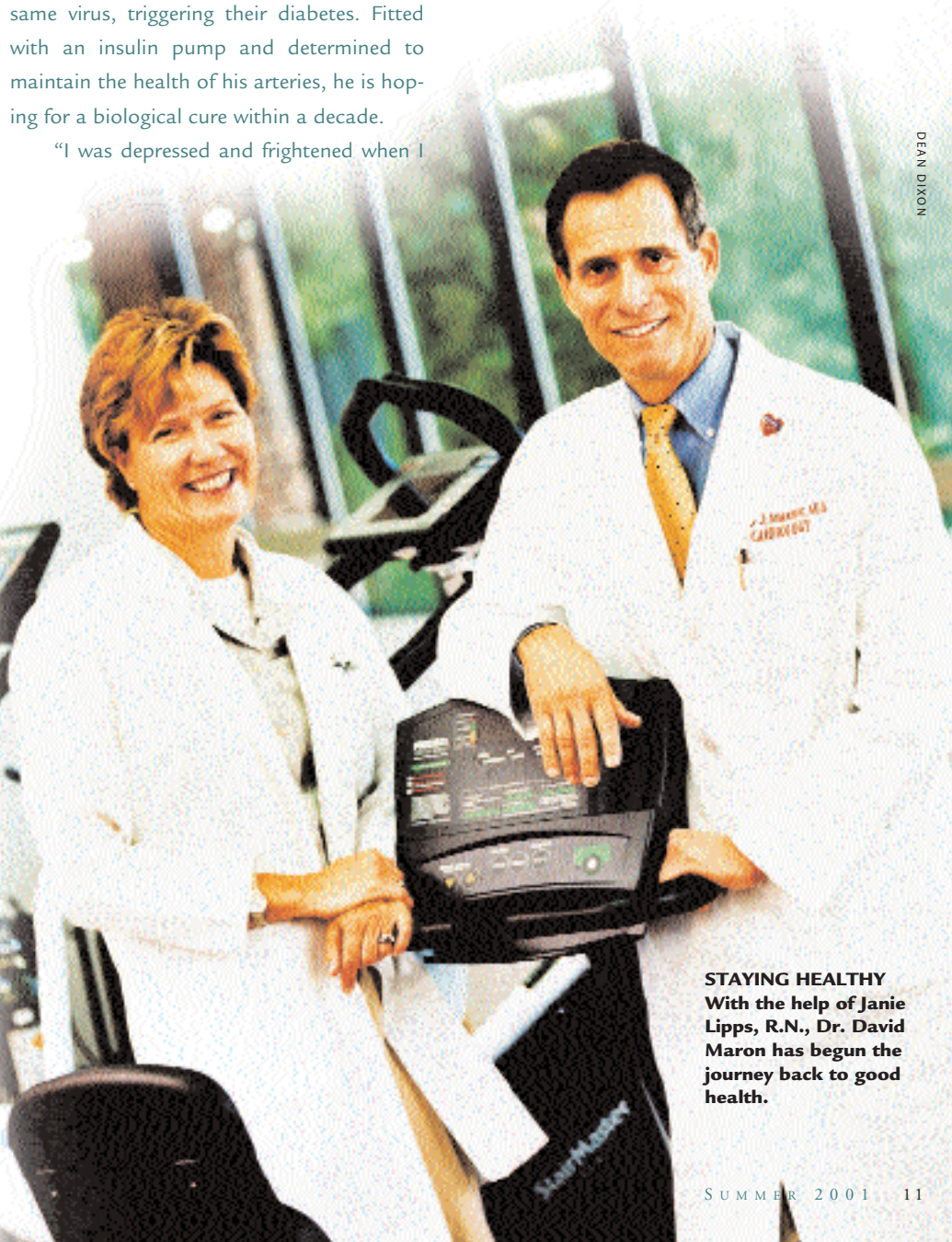
journey back to becoming the healthiest person he knew.

"Janie has been my lifeline. She has guided me, making me self sufficient and teaching me about diabetes and insulin management. She's been absolutely critical to my health and has helped me go from being totally out of control to completely in control."

He believes that he and a physician friend, also diagnosed with diabetes about the same time as Maron, were exposed to the same virus, triggering their diabetes. Fitted with an insulin pump and determined to maintain the health of his arteries, he is hoping for a biological cure within a decade.

"I was depressed and frightened when I

was diagnosed. But I'm back to my old self: confident, optimistic, engaged in my life, and energetic. Rather than being destroyed emotionally by the disease, I now look upon it as a nuisance, like flossing my teeth, something I need to do to maintain my health, something that I have become used to," he said, adding the experience has made him a better physician. "It's a struggle but there's no reason why I can't maintain my health. I realize there are far worse diagnoses."



DEAN DIXON

STAYING HEALTHY
With the help of Janie Lipps, R.N., Dr. David Maron has begun the journey back to good health.

Turning his life around

Ron Ortiz found out he had type 2 diabetes 14 years ago. He was 42, overweight, leading a busy life in Houston, and had little time for exercise.

Ortiz, a health care industry consultant who helps plan hospitals and clinics had several strikes against him – his Hispanic heritage, his weight and inactivity, and a family history of type 2 diabetes. So when he became increasingly thirsty and started feeling badly, it didn't take him long to figure out what was wrong.

"I just felt strange, like things weren't right. I work around people in the health care industry, and know quite a bit about health care, so I was paranoid. I knew it was something. I just didn't know what."

Approximately 7.5 million to 8.2 percent of all men in the United States have diabetes, according to the American Diabetes Association. They experience many of the same life-threatening complications as women, but have some that are unique. In men over 50 with diabetes, for example, the prevalence of impotence is 50 to 60 percent. Men also develop retinopathy more rapidly than women and amputation is 1.4 to 2.7 times higher in men than women.

Ortiz was no stranger to diabetes. His mother and an uncle both have the disease.

He had become very concerned about his weight gain, having shot up to his heaviest weight – 190. After he was diagnosed, he began to turn his life around. He started taking oral medication, exercising regularly and lost weight.

But about two and a half years ago, the weight began to creep back on. He had heart surgery – a valve replacement – and wasn't exercising as regularly. It was another wake up call.

"I became proactive," he said.

Today, Ortiz visits Vanderbilt's diabetes clinic regularly and remains on oral medication. He is also participating in a Vanderbilt study to test a slow-acting insulin that he receives once a day.

"I feel pretty good about myself. I feel like I've gotten my eating regimen down. I do my own cooking, always fresh foods. I don't eat french fries and chips. I guess my one vice is sourdough bread. About two years ago, I had a valve replacement and wasn't exercising. My blood sugar crept back up. That's when I started coming to Vanderbilt. Now I feel great."

IT RUNS IN THE FAMILY
With his hispanic heritage and a family history of type 2 diabetes, Ron Ortiz was a prime candidate for the disease.

DEAN DIXON

The most feared complication

Vanderbilt's Dr. Steven N. Davis, Rudolph H. Kampmeier Professor of Medicine and chief of the division of adult diabetes and endocrinology, is one of the world's experts on one of the most serious clinical complications of diabetes, hypoglycemia.

"We learned a very important lesson from the Diabetes Control and Complications Trial – that good glucose regulation can prevent or delay the complications of diabetes, but the major drawback of good control is a three-fold increase in severe hypoglycemia, or severely low blood sugar.

"Of all the complications one can get from diabetes, hypoglycemia is the most feared by patients," Davis said.

Davis's work focuses on understanding the mechanisms responsible for hypoglycemia, including how the autonomic nervous system is involved and also the relationship of exercise and hypoglycemia. It is believed that people with diabetes who have good glucose control have an increased incidence of hypoglycemia because they have counter-regulatory failure, they can't protect their bodies against low blood glucose.

"The body is set up to protect its own blood glucose," Davis said. "There's a very sophisticated and complex interplay of hormones and biochemical substrates that work to protect our blood glucose. If the blood glucose falls, this complex homeostatic response to raise the blood glucose is the counterregulatory response. The brain has to have blood glucose. If the brain is starved, even if it's for just a few minutes, there may be neuronal damage or neuronal death. So we need this response to protect our brains."

Clinicians also realize the importance of not only controlling the blood glucose in a patient with diabetes, but also the blood lipids, cholesterol and blood pressure.

The Holy Grail

Vanderbilt researchers agree. One of the most important advancements in diabetes care since the Diabetes Control and Complications Trial has been the insulin pump, a small mechanical device commonly used in patients with type 1 diabetes. Slightly larger than a pager, it is a computer-programmed pump that delivers insulin into the body through a tiny plastic tube in precise amounts at pre-programmed times. But, like what the beta cells do naturally for the body -- sense the glucose level and secrete exactly

Who's at Risk?

- People over age 45
 - People with a family history of diabetes
 - People who are overweight
 - People who do not exercise regularly
 - People with low HDL cholesterol or high triglycerides
 - Certain racial or ethnic groups – African Americans, Latinos, Asian and Pacific Islanders and Native Americans
 - Women who had gestational diabetes or who have had a baby weighing 9 pounds or more at birth
- American Diabetes Association

the right amount – pumps are not yet able to do. They must be activated.

Insulin pumps deliver insulin two different ways: the basal rate, where a small amount of insulin is delivered continuously all day or through a pre-meal bolus delivery, designed to cover the food eaten during a meal. This allows flexibility in the time meals are eaten, since the bolus can be programmed to deliver insulin at any time.

But old-fashioned finger pricking is still required.

"Getting a pump with a closed loop that will sense the blood sugar itself and recognize how much insulin to administer, rather than having to prick your finger and monitor

blood sugar, is what we're aiming for – the Holy Grail from the treatment standpoint," Granner said.

Graber agrees.

"Monitoring devices are coming along quickly. Non invasive monitoring that reads the insulin level, then triggers the pump, will probably happen in the next five years. The technology is already available and is being developed," Graber said.

"There are already better ways to monitor glucose in the body such as indwelling monitors so you can always know what your blood sugar is or watches that can sense what your blood sugar is from your skin. They exist and have been approved by the FDA. They're just not in widespread use."

No substitute for prevention

All the advancements in treatment and all the effort in finding a cure can't compete with the urgency for education about how to prevent type 2 diabetes, called the next great lifestyle epidemic by many public health experts, Graber said.

Educating the public that an overweight, sedentary lifestyle can lead to the development of type 2 diabetes is crucial.

In 1991, only seven states had obesity rates over 15 percent. By 1998 only five states did not.

"Prevention in the susceptible populations, those who have the most risk, is the most important thing right now," Graber said. "I'm just amazed every week when I pick up a survey that shows that 40 percent of Americans are overweight. Almost everybody who is overweight has some resistance to insulin so it closely goes along with being overweight."

Granner said that the cost alone of caring for patients with diabetes equals the cost for caring for patients with all types of cancer – more than \$98 billion a year.

"It's staggering," he said. 🍷



It's one of those mysteries that has researchers scratching their heads — why certain ethnic groups have an increased incidence of type 2 diabetes.

There are three groups who are even more at risk than the general population — African Americans who are 1.7 times as likely to have type 2 as the general population; Latinos who are almost twice as likely; and Native Americans, where the prevalence is 12.2 percent. In some tribes, like the Pima Indians, the rate of type 2 diabetes is the highest in the world -- more than 50 percent in adults between the ages of 30 and 64.

disparity among the races

by Nancy Humphrey

In Nashville, Vanderbilt University Medical Center and Meharry Medical College are part of a coalition of Nashville colleges, churches and health care providers that has launched a diabetes intervention program. The program is an outreach effort of the Nashville Disparities Coalition which is looking at six health priority areas including infant mortality, breast and cervical cancer screening and management, child and/or adult immunization levels, HIV/AIDS, cardiovascular disease and diabetes. The group recently won funding from the Center for Disease Controls REACH (Racial and Ethnic Approaches to Community Health) 2010 to first tackle diabetes and cardiovascular disease.

Led by Matthew Walker Comprehensive Health Center, the REACH group is looking specifically at African Americans in North Nashville, where about 86 percent of the total 48,601 population is black. The group has a higher death rate due to cardiovascular disease and diabetes than the white population in Davidson County as well as a higher incidence of diabetes than African Americans in the rest of the country.

“It was evident right away that since both Vanderbilt and Meharry served underserved, under-funded populations and since a significant number of the inner city population were African Americans and other minorities, this would be a good area to focus on,” said Dr. Clifton K. Meador, professor of Medicine and director of the Vanderbilt Meharry Alliance.

“We decided to take on diabetes and set out to try to attack the incidence of the disease as well as its complications – blindness, amputation of the lower extremities and chronic renal disease. If we could make a dent in these three areas, independent of glucose control, we would be making a difference,” Meador said.

“Since the 1940s diabetes has positively blossomed among the various minority groups, especially Native Americans,” said

James W. Pichert, associate professor of Medicine and one of the members of the Vanderbilt Diabetes Center coalition team. In certain tribes of Pima Indians, the incidence of diabetes in adults is 50 percent, Pichert said. “It is believed that the epidemic of diabetes is a result of two things – some genetic factors as well as lifestyle changes, cultural traditions and a lack of preventative education, that have evolved over time.”

Pichert and David G. Schlundt, Ph.D., associate professor of Psychology and assistant professor of Medicine, lead the Vanderbilt portion of the project.

The group has received funding from foundations, including the Memorial Foundation, to study the disparity of the incidence of diabetes in this Nashville population, including finding out what lifestyle problems might increase the incidence of diabetes.

“Race is a factor and so are gender disparities,” Pichert said. Whether it’s intended or not, people of different genders and races are treated differently,” Pichert said. “There is also a difference in communications styles. Patients may not be able to speak up and let their health care professionals know what their problems are or what might get in the way of their following a program.”

Pichert said some residents in part of the north Nashville area have told the REACH team that it can be hard to follow an exercise plan.

“If I’m supposed to take up an exercise program, and if there are boarded up homes, medical waste and syringes on the street, glass all around, loose, vicious dogs, and if only every other street light works, am I going to take a nice walk through that neighborhood or am I going to stay in and be safe?”

Members of the coalition are going through the neighborhood with cameras to try to identify barriers.

“Racial disparities in diabetes are interesting, but they’re also frustrating, aggravating and outrageous,” Pichert said. “That’s why we’re committed to this project.”

Diabetes Center

The Vanderbilt Diabetes Center is devoted to training diabetes researchers, treating patients, and investigating causes and possible cures for the disease.

The center’s director is Dr. Daryl K. Granner.

The key components of the center comprise several different aspects of diabetes research, including training programs and a drug development partnership. The centerpiece program is the National Institutes of Health-sponsored Diabetes Research and Training Center. Established in 1973, the DRTC is the oldest, and one of the most respected, of the NIH centers.

VUMC has a long history of excellence in basic research related to diabetes, endocrinology, insulin action and hormone action in general. The Nobel Prize in Physiology or Medicine was awarded to two Vanderbilt faculty members: Dr. Earl W. Sutherland Jr. in 1971 for work on cyclic AMP and signal transduction and Dr. Stanley Cohen in 1986, for his discovery of and work with epidermal growth factor and its receptor.

The Frederick Banting Award has gone to Drs. Sutherland, Charles R. Park, and Alan D. Cherrington; the Lilly Award to Drs. Oscar R. Crofford Jr., John H. Exton and Cherrington; the Novartis Senior Investigator Award to Crofford and the Novartis Junior Investigator Award to Dr. Steven N. Davis.

The center has three NIH-sponsored training projects: a summer program that trains medical students for diabetes research; a molecular endocrinology training program for pre-and post-doctoral Ph.D. students; and a training program for MDs who want to do research in diabetes. There is also the Juvenile Diabetes Foundation-Veterans Administration Research Center, directed by Davis, and a clinical care program, currently directed by Dr. Alan L. Graber, professor of Medicine. Dr. Addison Scoville Jr. established a diabetes clinic at VUMC in the 1950s.

There is also a focus on developing new drugs for the treatment of diabetes.

Last February was like any other time for two-year-old Emma Wright and her parents. Lots of activity. Lots of laughter. Days with young children are rarely dull.

But the week of Feb. 19 Emma's parents noticed that their normally active young daughter was excessively thirsty and, consequently, was making frequent trips to the bathroom. One day while she and her mother were chasing each other around the house, Emma suddenly sat down on the floor. She was winded and tired.

"I know she's in better shape than me," said her mother, Shelley. "When she did that, I thought, something is really wrong here. I knew it was something bad."

settling into a lifetim*e*

On Feb. 22, her worried parents took her to her pediatrician. Urine and blood tests confirmed the diagnosis that had already been made in their hearts – type 1 diabetes. Her blood sugar, which should have been 120, was over 500.

"It was just classic how she presented," said Shelley Wright, Emma's mother. "We had a gut feeling it was diabetes but I kept

telling myself that it was something I didn't know about. It wasn't. It was exactly that."

Scott Wright, Emma's father, who ironically prepares tissue cultures for researchers in the Vanderbilt Diabetes Center, said diabetes crossed his mind, as well as his wife's, early that week, but they did not openly talk about it at first.

Late the afternoon of the 22nd, after seeing Emma, her pediatrician sent the

by Nancy Humphrey

A NORMAL
Emma Wright and her
family are learning
how to control
diabetes, and enjoy life
in the process.

diabetes

Wrights to Vanderbilt Children's Hospital. They were relieved to find out that Emma would not have to be admitted into the hospital. She was tested, and her parents were given a crash course in finger pricking and giving injections before they were sent home. Getting her blood sugar under control was imperative.

Dr. William E. Russell, associate professor of Pediatrics and director of the divi-

sion of Pediatric Endocrinology, said that one-third of children with previously undiagnosed diabetes are hospitalized with ketoacidosis, very high sugar and acid levels in the blood. Diabetic ketoacidosis can lead to a coma.

Russell said children with diabetes are generally diagnosed with type 1 diabetes later in childhood – pre-adolescence to adolescence – but that among the thousand or so children with diabetes followed at Vanderbilt, a handful were diagnosed before their first birthday.

“Their lives are better these days because we have better tools to take care of diabetes, tools that allow them to keep their blood sugar close to normal,” he said. “Children with diabetes have more flexibility, but the downside is that if you're a child with diabetes, there's a whole lot more work to do to keep your diabetes under control.”

Russell said that patient and family education is essential.

“Once we get past the fears and basic survival skills, like getting shots and pricking fingers, we talk to the families about complications and long term problems. If we work together and keep the blood sugar as close to normal as we can practically do, there's every reason to think our patients won't have these complications and their risks will be very much reduced.”

Control is very much on the minds of the Wrights. Emma is a patient of Dr. Jennifer L. Najjar, assistant professor of Pediatrics. When she was diagnosed, her parents had to prick her finger to check her blood sugar five times a day, but have recently been able to eliminate the middle of the night finger prick. She has three shots of insulin a day and her parents must make sure that her mealtimes and any naps fit into her strict regimen.

“This is her life, unless a miracle occurs or research finds an answer. And that's years away,” Scott said.

Emma, for now, is adjusting.

“She adapted so quickly at first I couldn't believe it,” Shelley said. “She had a rough adjustment at first, then really settled into it. Now she's starting to cry and kick. I guess it's going to come and go in phases.”

Shelley said that although adapting is not quite as easy for the parents, it's something they have to do.

“We were told that she would just about lead a normal life,” she said. “Some days that sounds really positive, like she can do almost anything she wants to do, but other days, I don't want any limitation on my child whatsoever,” she said. “I totally swing from day to night on that. But there's nothing you can do about it. You just have to step up and do what you have to do.”

Shelley said it is obvious that Emma feels better.

“The week she got sick, she was tired, thirsty and never hungry,” she said. “But she came up to me, after she started feeling better, and wrapped her arms around me. She's usually too busy for a lot of holding. She told me, ‘I'm so happy.’ I know it's because she's feeling better.”

Warning signs

Type 1

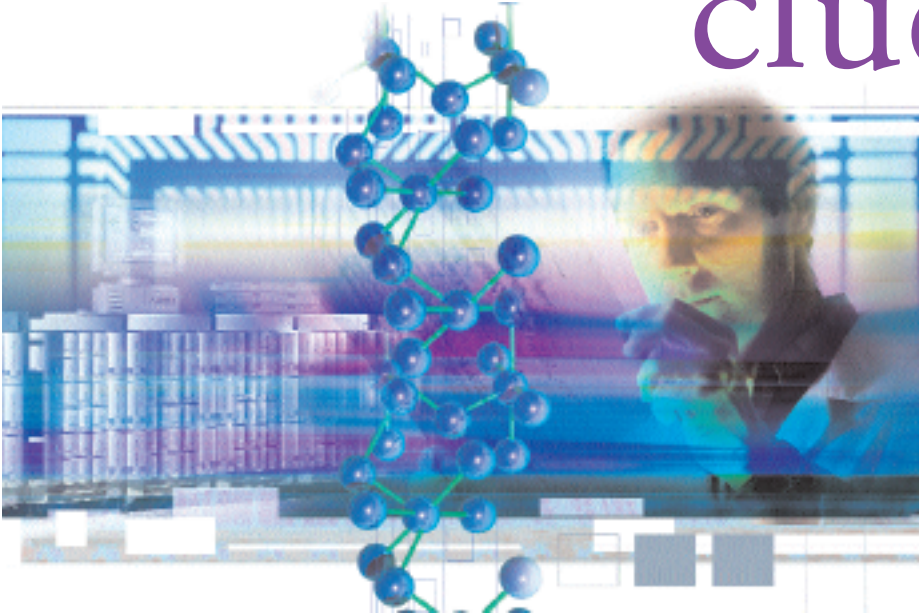
- Frequent urination
- Unusual thirst
- Extreme hunger
- Unusual weight loss
- Extreme fatigue
- Irritability

Type 2

- Any of the type 1 symptoms
- Frequent infections
- Blurred vision
- Cuts and bruises slow to heal
- Tingling/numbness in the hands or feet
- Recurring skin, gum or bladder infections

– American Diabetes Association

mouse models offer new clues



Diabetes is not a simple disease. Its ultimate outcome — uncontrolled blood sugar levels — is the result of multiple regulatory systems going astray, said Dr. Mark A. Magnuson, professor of Molecular Physiology and Biophysics and assistant vice chancellor for Research.

“It’s a multi-system disease,” he said. “Many different tissues play a role in determining the blood glucose concentration.”

Magnuson and others are studying how genes contribute to diabetes and its myriad complications. To overcome the multi-tissue complexity of diabetes, they are using new technologies to genetically engineer mice that lack selected genes in single tissues, like pancreatic beta cells or liver.

“By eliminating the function of a gene only in one tissue or another, you can clearly determine what a gene is doing in a single

tissue and the role of the tissue in blood glucose regulation,” Magnuson said. “Tissue specific knockouts (gene deletions) are new in diabetes research. They’ve already had a large impact on understanding what’s happening in the disease.”

Glucokinase, the insulin thermostat

Pancreatic beta cells—the insulin-producing cells in islets—and liver are tissues of particular interest to diabetes research, because of their prominent roles in responding to and utilizing blood sugar. Magnuson’s laboratory engineered the first beta cell specific and liver specific gene knockouts of a gene called glucokinase, an enzyme that is essential for glucose metabolism in cells.

Human beings with mutations in the glucokinase gene suffer a rare form of diabetes called Maturity Onset Diabetes of the Young, type 2 (MODY-2). To understand why defects in glucokinase cause diabetes, investigators first tried to completely eliminate the gene from mice—a total knockout. But glucokinase knockout mice die shortly after birth, preventing physiological studies in adult mice.

Generating tissue specific glucokinase knockouts has enabled Magnuson and colleagues to “sort out the liver and beta cell specific functions of the enzyme.”

“The studies have really pointed to a central role for glucokinase in the feedback loops of sugar and insulin regulation,” Magnuson said. He likened the interplay of glucose stimulation and insulin secretion to a furnace—where high blood sugar is the

by Leigh MacMillan

temperature that prompts the furnace, pancreatic insulin secretion, to turn on or off.

“Glucokinase acts like a thermostat in the pancreatic beta cell,” Magnuson said. “It enables insulin secretion to be regulated by changes in the blood glucose concentration.”

Glucokinase is being explored as a drug target by several pharmaceutical companies, Magnuson said. “A drug binds to glucokinase and activates it, resetting the thermostat for insulin secretion. This could be a new avenue for treating diabetes.”

Glucokinase is but one example of a gene being eliminated in specific tissues to develop mouse models that will shed light on the pathophysiology of diabetes. Vanderbilt has an active facility, the Transgenic Mouse/ES Cell Shared Resource, involved in the development of other genetically modified mouse models.

A national center for diabetes discovery

Generating new mouse models is one thing; performing physiological tests in mice is another thing entirely. At Vanderbilt, the ability to assess genetically

modified mice for physiological defects like those in diabetes has taken a giant leap forward with the establishment of the Mouse Metabolic Physiology Center (MMPC).

The Center was recently funded by the National Institutes of Health as one of three national centers to study mouse models, potentially useful for understanding diabetes, its complications, obesity and related metabolic diseases or conditions. The national centers – VUMC, the University of Cincinnati and Yale University – will work together to analyze mouse models from across the country.

“This new mouse physiology center was designed to dovetail with other efforts in the Vanderbilt Diabetes Center,” said David H. Wasserman, Ph.D., professor of Molecular Physiology & Biophysics and director of the MMPC. “We now have a more comprehensive program for studying diabetes and related disorders.”

Three core MMPC laboratories will analyze metabolism, energy balance, physical activity, vascular physiology, and other physiologic alterations that may be present in the diabetic state. Vanderbilt’s strength,

Wasserman said, is in the ability of its cores to perform physiological tests in “conscious unstressed mice.” A good example of this, he said, is the insulin clamp, a test commonly used to assess insulin sensitivity.

Vanderbilt Diabetes Center investigators also have miniaturized standard analytical tests for hormones and metabolites; the analytical core can measure insulin and other products in the tiniest drop of blood. The vascular pathophysiology core can perform echocardiography and electrocardiograms and measure blood pressures—not a simple procedure in small animals—in conscious mice.

“Our strengths in mouse testing in vivo were recognized by the funding of this new mouse physiology center,” Wasserman said. “The center grant brings resources to Vanderbilt that will allow us to lead the international community in describing and studying the gene defects that may be involved in diabetes, and in identifying potential sites of action for correcting diabetes and its complications.”

Is transplantation the answer?

Diabetic patients in middle Tennessee might soon have a new option for care. Dr. David Shaffer, a renal and pancreas transplant surgeon, joined the Vanderbilt Transplant Center as chief of the renal transplant program June 1.

In addition to kidney transplants, Shaffer, who came from New England Deaconess Hospital, will oversee restarting Vanderbilt’s pancreas transplantation service.

“This will be an important part of the comprehensive service we provide together with our diabetes center,” said Dr. C. Wright Pinson, professor of Surgery and surgical director of the Transplant Center.

The benefits are plain. A transplanted pancreas brings people with diabetes closer to normal blood glucose control than any other method. Insulin is produced from the islet cells in the pancreas and released into the blood.

Transplants aren’t for every patient with diabetes. They are usually recommended only for patients with type 1 diabetes, whose islet cells have been destroyed and who don’t produce enough insulin to regulate blood sugar levels.

Across the country, 1,100 people were waiting for pancreas transplants in 2000. There were 433 pancreas transplants performed in the United States in 2000. At Vanderbilt, Pinson estimates a caseload between 20 and 40 each year.

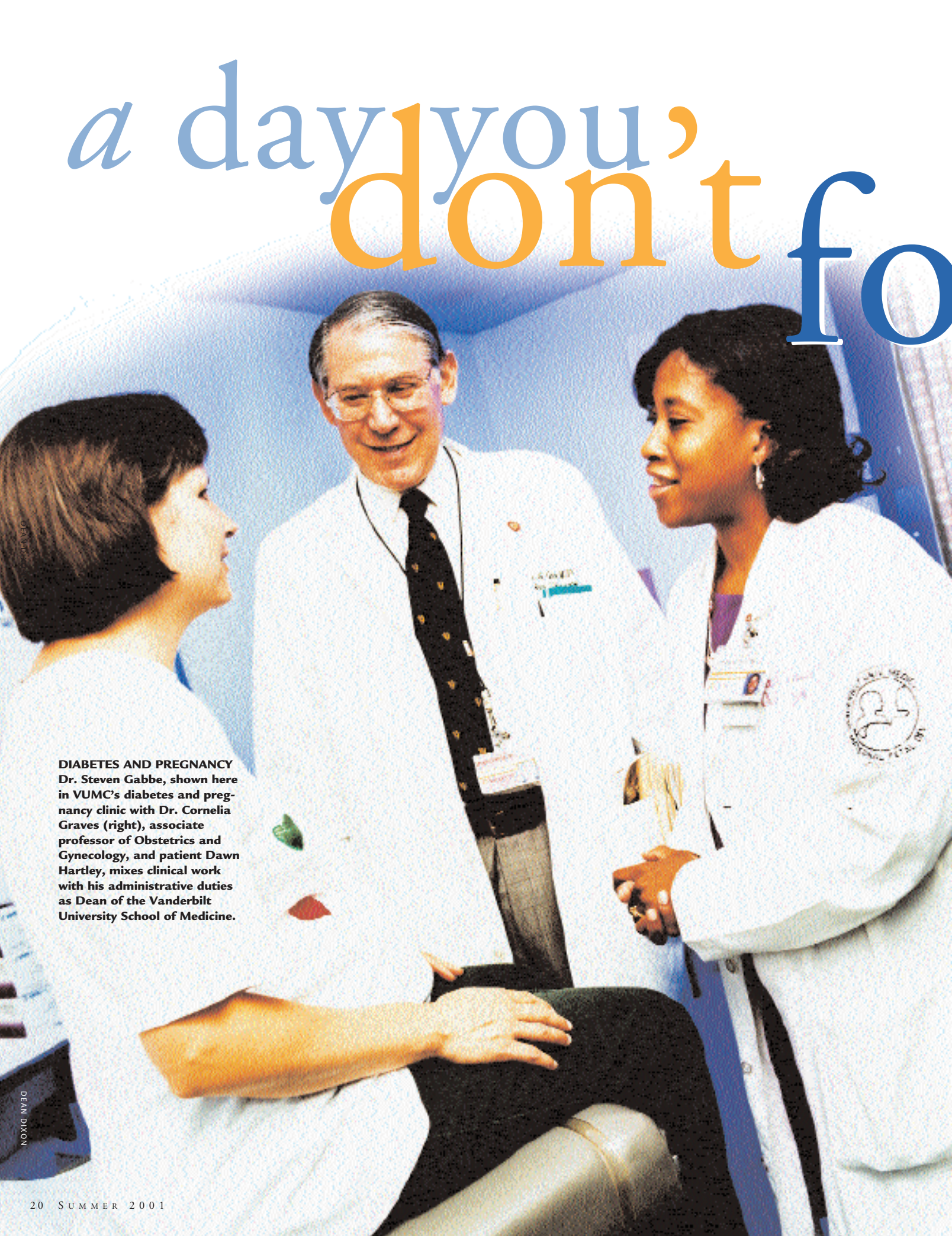
Vanderbilt has intermittently transplanted pancreases in the past. Across the country, programs have seen improved success with pancreas transplants. A recent study in *The Annals of Surgery*, out of the University of Minnesota, followed more than 1,000 pancreas transplant patients since 1966. Success rates were low at first, but the outcome has improved in parallel with success in performing other organ transplants.

Now, Pinson said, “It’s clear-cut that pancreas transplants are advantageous.”

The Minnesota study also suggests that islet cell transplantation will ultimately replace pancreas transplantation. Another new faculty member, Pinson said, will likely begin that service at Vanderbilt soon.

The less invasive islet procedure is believed by many to be the future replacement for pancreas transplants as well as the ultimate cure for diabetes. – CLINTON COLMENARES

a day you, don't fo



DIABETES AND PREGNANCY
Dr. Steven Gabbe, shown here in VUMC's diabetes and pregnancy clinic with Dr. Cornelia Graves (right), associate professor of Obstetrics and Gynecology, and patient Dawn Hartley, mixes clinical work with his administrative duties as Dean of the Vanderbilt University School of Medicine.

DEAN DIXON

DEAN DIXON

Steven Gabbe was a busy third year medical student at Cornell University Medical College when he diagnosed himself with type 1 diabetes.

He suspected diabetes. He tested his own urine and

orget confirmed what he already knew. “I had the symptoms. It didn’t take a rocket scientist,” he said.

It was Feb. 3, 1968. “Most people remember the day,” he said.

But Gabbe, now Dean of Vanderbilt University School of Medicine, learned quickly and expertly how to manage his disease and maintain an active lifestyle. Gabbe controls his diabetes. It does not control him.

by Nancy Humphrey

He was encouraged by his medical school advisor and others to go into a specialty with a more structured schedule like radiology or pathology, one in which you have more control over your time, but he followed his heart instead and chose obstetrics and gynecology.

“I think that was good advice given the way diabetes was being cared for at that time,” he said. “But I had made up my mind what I wanted to do.”

Gabbe, who was chairman of obstetrics and gynecology at the University of Washington and president of the American Gynecological and Obstetrical Society before coming to Vanderbilt, accidentally fell into his specialty and in doing so

became one of the world’s leading experts on diabetes and pregnancy. During his first year of residency in Boston, he was referred to a Boston internist for his diabetes care. The physician told him that he did not enjoy treating patients with type 1 diabetes (then called juvenile diabetes) and referred him to a physician, the late Dr. Priscilla White, who took care of pregnant women with the disease. He became intrigued and ended up working with White who had pioneered the treatment of diabetes in pregnant women, and carrying on her work.

Gabbe, 55, is believed to be the only medical school dean with type 1 diabetes. He has worn an insulin pump for the past five years and has been able to avoid the many complications that are common with the disease. He monitors his glucose very carefully, is careful about what he eats, and has been an avid runner for the past 25 years. Married to fellow VUMC faculty member Dr. Patricia C. Temple, a pediatrician with experience in managed care administration, and the father of four grown children, he has run two marathons

and many half marathons.

“I have never been hospitalized; never been taken to the emergency room; and have never had any serious complications. In that respect, I’m unusual,” he said.

“I have benefited from the many improvements in care,” Gabbe said, adding that at the time he was diagnosed, before the nationwide Diabetes Control and Complications Trial, he opted for tight control of his blood sugar at a time it was unclear whether tight control helped.

“I decided I would try to keep my sugar as normal as possible and I have,” he said.

“I remember when glass syringes and needles had to be boiled, your urine had to be tested, and there were a limited number of insulins available. So much has changed since I was first diagnosed and there are so many changes on the horizon,” he said.

“The advancements over the past 30 years have given me and other individuals with diabetes hope,” he said. “I can live a much more normal life today. Normal life today is nonstop, exercise when you can, traveling, all of those things that would have been very difficult without the pump. I can sit on a plane and check my blood sugar. I can travel from Seattle to D.C. and not have to worry about time changes. I can go to a three-hour meeting and I don’t have to stop and take a reading.”

In addition to being a good role model for others with diabetes, Gabbe is continuing his clinical work with diabetic pregnant women in VUMC’s diabetes and pregnancy clinic. He works closely with Dr. Cornelia R. Graves, associate professor of Obstetrics and Gynecology, in the specialized treatment of women who are diagnosed with diabetes. He will continue to be involved in the Diabetes Research and Training Center as an investigator and plans to become active in local diabetes organizations. 📍

The granddaddy of diabetes studies

Nearly a decade ago, the National Institute of Diabetes and Digestive and Kidney Diseases (NIDDK) completed the largest and most comprehensive diabetes study ever conducted.

The principal investigator of the landmark 10-year clinical study of diabetes complications, the Diabetes Control and Complications Trial (DCCT), was Vanderbilt's Dr. Oscar B. Crofford Jr., now professor of Medicine, emeritus.

Quite simply, it's the granddaddy of diabetes studies, generating some of the most profound changes in history in the way patients with diabetes are treated.

The clinical study, conducted from 1983 to 1993, involved 1,441 volunteers with type 1 diabetes and 29 medical centers in the United States and Canada. It showed that aggressively treating diabetes can significantly reduce the onset of serious complications such as eye, kidney and nerve diseases caused by diabetes. It also demonstrated that any sustained lowering of blood sugar helps, even if the person has a history of poor control.

The study compared the effects of two treatment regimens – standard therapy and intensive control – on the complications of diabetes.

The main findings were that patients who used three or four insulin injections a day or an insulin pump to keep glucose levels as close to normal as possible can reduce complications by about 60 percent. The study has had a major impact on the way diabetics are treated for the disease.

The results were so dramatic that the trial was ended a year ahead of schedule.

- NANCY HUMPHREY



A revolutionary discovery

The discovery of insulin in 1921 has been called one of the most revolutionary moments in medicine.

The effect was immediate and spectacular. People with diabetes, who had been issued a death sentence could now live full and productive lives, thanks to the brilliance of Dr. Frederick Banting and his associates.

On Halloween night, 1920, after reading an article in a medical journal, Banting wrote down the idea for research aimed at isolating the long-sought internal secretion of the pancreas.

"After reading the article...I was unable to sleep," Banting said in a 1934 speech. *"There seemed to be in some vague way a relation between the islet cells of the pancreas and clinical diabetes."*

Banting, also an accomplished artist, was assisted by Charles Best, a Toronto medical student, John J. R. Macleod, head of the physiology department at the University of Toronto, and J. B. Collip, a biochemist.

Banting was hailed as the principal discoverer of insulin, because his idea launched the research and because of his involvement in the early use of insulin, but he was jointly awarded the Nobel Prize in medicine/physiology in 1923 with Macleod. They were the first Canadians to ever receive the honor. Banting felt Best was slighted in the recognition and gave him half of his prize money.

- NANCY HUMPHREY

Row of Houses (above), painted by Dr. Frederick Banting in 1925, is owned by Dr. Steven Gabbe, Vanderbilt University School of Medicine's new dean. Gabbe was diagnosed with diabetes as a medical student.

Protein links heart disease, diabetes

Vanderbilt researchers have identified a protein's key role in the formation of atherosclerosis, the leading cause of death in the United States, and helped establish a link between heart disease and diabetes. Their findings, published in the June 1 issue of *Nature Medicine*, could lead to targeted therapies to prevent both diseases.

The protein, aP2, had previously been linked in mice to insulin resistance and hypertriglyceridemia, two risk factors for heart disease in a cluster of symptoms - others include high blood pressure, abdominal obesity and premature atherosclerosis - known as the metabolic syndrome.

"That alone suggested a potential role (for aP2) in atherosclerosis," said Dr. MacRae F. Linton, associate professor of Medicine in Cardiology and primary investigator of the study.

Also, aP2 is known to be expressed by fat cells and macrophages. In macrophages, the protein promotes the formation of foam cells,

cholesterol-loaded macrophages present in the initial events of atherosclerosis. That role, Linton said, is independent of its effects on insulin resistance or increasing plasma lipids.

"That made us wonder if macrophages' expression of aP2 has a role independent of fat cells' production of aP2," Linton said.

To test aP2's role in atherosclerosis, the buildup of plaque in arteries that restricts blood flow to the heart, Linton and his colleagues used mice genetically engineered to be at risk for the disorder.

Collaborating on the study, funded by a grant from the National Heart, Lung and Blood Institute, were Dr. Sergio Fazio, associate professor of Medicine and Pathology and co-director with Linton of the Atherosclerosis Research Unit; Dr. Jeffrey Boord, a post-doctoral fellow in Endocrinology; and Dr. Gokhan Hotamisligil and other researchers at the Harvard School of Public Health.

- CLINTON COLMENARES

the st. john's study

BY NANCY HUMPHREY

It sounded like a safe and easy fix – taking the herbal remedy St. John's wort to ease depression.

After all, claims in health food stores and on the internet show it can not only ease depression but can also help you sleep, get rid of cold sores and ward off recurrent ear infections. It's even been credited with easing the HIV infection that causes AIDS.

And St. John's wort isn't even a new remedy. It's been used as an herbal medicine for 2,000 years to treat anxiety and depression.

But a recent VUMC study, the first large-scale, multi-center trial in the United States of the effectiveness of St. John's wort in treating moderately to severely depressed individuals, has shown that the herbal remedy is not effective.


Results of the double-blind, placebo-controlled study, led by Dr. Richard C. Shelton, professor of Psychiatry at VUMC, were published in the April 18 Journal of the American Medical Association.

The study looked at 200 patients at 11 academic medical centers across the country who had been diagnosed with a depression of at least moderate severity.

The participants in the study were given either 900 to 1,200 milligrams of St. John's wort per day or a placebo for eight weeks. Then, the study was unblinded and patients doing well with St. John's wort received the herb for another six months. Those not responding were given an anti-depressant.

The results showed that the herbal remedy was no more effective than a placebo for the treatment of major depression of at least moderate severity.

"This study seriously calls into question the effectiveness of St. John's wort in the treatment of the typical depressed patient with a moderate to severe depressive condition," Shelton said. "People have been attracted to St. John's wort because it comes from a natural source, but our study shows that it's a treatment that may not work," he said.

"As in most significant illnesses, the most dangerous treatment is the treatment that doesn't work. Depression is a life-threatening disease and represents the number one most common cause of disability in industrialized countries. About 5 to 10 percent of people who suffer from depression, and who go untreated, will die of suicide. For those reasons alone, we recommend that patients suffering from depression take established treatments." 





Emergency department to undergo renovation

The adult Emergency Department's infrastructure will soon be renovated. The Vanderbilt University Board of Trust recently approved a \$2.66 million renovation of the main ED to treat the acute setting's growing pains and bring it up to date. Renovation is slated to begin in July.

"We have a number of problems in the main ER with space and layout that affect how we do our jobs," said Dr. Corey M. Slovis, professor and chair of the department of Emergency Medicine. "It was designed in the 1970s and built in 1980 and was envisioned to be a clinic and walk-in area for a university hospital, not the home of a regional trauma center."

The current floor plan was based on an annual patient volume of 20,000. Now, Slovis said, patients and staff are squeezed as total visits to the adult and pediatric EDs exceed 60,000. The department also treats acute chest pain care and regional toxicology referrals.

"This will be a significant improvement," Slovis said. "Currently, we'll have a patient with chest pain next to someone with gunshot wounds to the chest, with only a thin wall between them."

To better serve trauma and medical emergencies, three new trauma bays will replace the current two. The bays will be twice the size, making them safer and large enough to accommodate six patients in a disaster, Slovis said. They also will be equipped with OR-quality lighting and medical gasses that drop from the ceiling.

The trauma bays will move from their current location along the main corridor to a back wall, where they will be closer to the CT scanner, the elevators to the operating rooms, and the LifeFlight Skyport. This makes room for two additional critical care cardiac rooms.

Family and friends accompanying patients will see a new look, too. The waiting area will grow outward, creating new space to almost double the area's size, and new furniture will be installed. - CLINTON COLMENARES

New imaging technology developed at VUMC

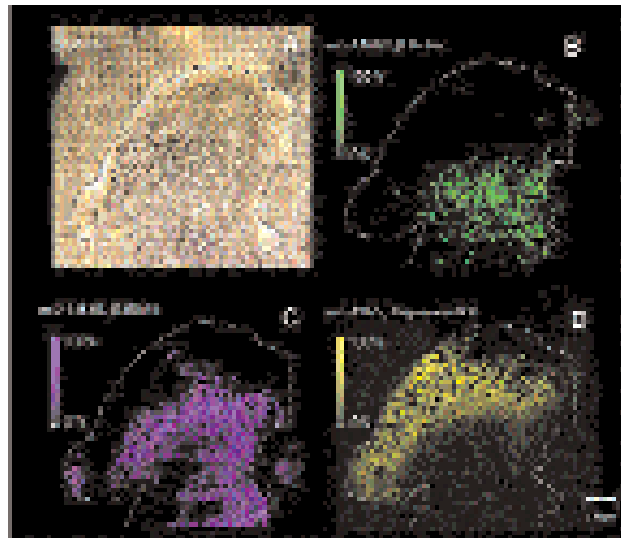
Move over Kodak. Vanderbilt University Medical Center investigators have developed a new way to take pictures - of the molecules in a slice of tissue, that is.

The technique, called Imaging Mass Spectrometry, offers scientists a new tool for visualizing where proteins are located in cells and tissues. This kind of information is important to understanding how proteins work and how they change in disease states. The Vanderbilt team applied the new technology, described in the April issue of *Nature Medicine*, to taking molecular photographs of normal and malignant brain tissue slices.

"One of our goals is to look at tumor tissues and attempt to find changes in expressed proteins that are the result of, or contribute to, tumor development," said Richard M. Caprioli, Ph.D., Stanley Cohen Professor of Biochemistry and director of the Mass Spectrometry Research Center. "We know from this and other work, for example, that the pattern of proteins expressed in the outer edge of a growing tumor is different from that of the interior, and that both of these are different from the normal tissue right next to the tumor."

Caprioli hopes that someday the technology can be used to assess tumor margins during surgery and to detect molecular changes in a biopsy sample before a tumor has started any significant development.

The new Imaging Mass Spectrometry technology uses a standard MALDI (Matrix-Assisted Laser Desorption Ionization) mass spectrometer, an instrument that analyzes molecules based on their mass-to-charge (a property related to molecular weight). Caprioli and colleagues



Markus Stoeckli, Ph.D. and Pierre Chaurand, Ph.D. modified the standard instrument's electronics and software to image tissue slices.

To take the new molecular photographs, a chunk of tissue is first frozen so that it can be cut into super-thin slices. A tissue slice is then coated with a matrix material and introduced into the mass spectrometer, where a laser beam blasts successive spots on the tissue to release molecules for analysis. Each spot becomes a pixel in the final image, with each pixel containing a record of the molecules located in that tiny spot.

Computer processing can then be used to display the locations of selected proteins, based on their size. Caprioli's team successfully used the new imaging technology to take molecular pictures of two types of tissues - normal mouse brain and human brain tumor grown in a mouse. In the brain tumor slices, the researchers identified proteins uniquely located in the tumor's interior and at its invasive outer edge. - LEIGH MACMILLAN

Dr. John E. Chapman, Judy Jean Chapman, Dr. Harry R. Jacobson and Meharry President Dr. John E. Maupin enjoy the gala held in honor of the longtime dean.



A fond thank you




Dr. John E. Chapman and Judy Jean Chapman are seated in front of one of his gifts, a jeweler's copy of the Order of the Seraphim, Sweden's highest honor.

Dr. John E. Chapman's 25 years as dean of the Vanderbilt School of Medicine were recognized and honored by a two-day series of programs in April, culminating in a black-tie gala at the Renaissance Hotel attended by more than 1,000 colleagues, students, and friends.

Chapman, who was honored at the gala along with his wife, Judy Jean, was clearly overwhelmed by all the honors, accolades, and gifts he had received during the two-day event.

"I have never been speechless in my life," he told the hushed gathering, pausing a beat, before adding, "And I am not speechless now." Another pause for the laughter to subside, then: "But I am overwhelmed."

A medical center reception was also held for faculty, staff and students, and friends and students from the School of Medicine presented a music and dance show in tribute to Chapman, with another reception following the program. Dr. Ruth Kirschstein, acting director of the National Institutes of Health, delivered the fourth annual John E. Chapman lecture during the two-day event to an overflow crowd in Light Hall. 

- WAYNE WOOD



A musical group performs at a student tribute to Dr. John E. Chapman.

the beginning *of a* journey

DANA JOHNSON



U.S. Senator Bill Frist, left, Dr. Harold Moses and Cancer Center Board of Overseers member Tony Scoville, attend the NCI designation press conference.

“A dream realized – and a promise kept.”

That’s how Dr. Harry R. Jacobson, Vanderbilt’s vice chancellor for Health Affairs, described the recent announcement that the Vanderbilt-Ingram Cancer Center had been designated by the National Cancer Institute as a Comprehensive Cancer Center. The designation is the highest ranking awarded cancer centers by the NCI, one of the National Institutes of Health and the world’s foremost authority on cancer.

BY CYNTHIA MANLEY

Achieving this designation was a primary goal when the Cancer Center was initially established in 1993 and Dr. Harold L. Moses was named to lead it.

But the designation is the beginning of a journey, not an end, Moses said.

“Designation as a Comprehensive Cancer Center carries with it great obligation,” he said. “We have a mission to work even harder to find ways to defeat cancer and to serve our community, not only through exceptional patient care, but as a resource of accurate information about cancer risk, cancer development, cancer therapy, early detection and prevention.”

About 200 faculty, staff, board members,

community leaders and news media were on hand as U.S. Sen. Bill Frist (R-Tennessee) formally announced the designation on March 9. Joining Frist were Nashville Mayor Bill Purcell; Jacobson; Moses; and Orrin Ingram, chairman of Vanderbilt-Ingram’s Board of Overseers.

“The Comprehensive Cancer Centers are the leaders of the battle against cancer, and the places where the cures for cancer are most likely to be found,” Frist said. “I’m proud that Vanderbilt has worked so hard to earn this distinction, and I’m pleased that the NCI has awarded this prestigious designation in recognition of Vanderbilt’s commitment to fight cancer.”

Purcell noted that the designation is a source of pride not only for Vanderbilt but for the city as well. "At the time of a cancer diagnosis, when we need our friends and family the most, we can rest a little easier knowing that we have access to the most advanced cancer care without traveling far from home," Purcell said.

And Ingram said the designation was a "testament" to the quality work being done by scientists, physicians, nurses and others. "This work is helping me to imagine a world without cancer," Ingram said, referring to the slogan of Vanderbilt-Ingram's ongoing fund-raising campaign.

Vanderbilt-Ingram is the only center in Tennessee to join the top tier of cancer centers nationwide. Only 39 institutions have achieved designation as a Comprehensive Cancer Center, which involves a competitive review process.

These centers have met rigorous standards, specifically in three areas:

- 1) innovative and comprehensive

research into the causes, development, prevention and treatment of cancer;

- 2) leadership in the development and study of new therapies;

- 3) commitment to the community

Vanderbilt-Ingram is the only center in Tennessee to join the top tier of cancer centers nationwide.

through programs for cancer information, education and outreach.

Vanderbilt-Ingram is the only Comprehensive Cancer Center in Tennessee and one of just a handful in the southeast. Six states that border Tennessee do not have Comprehensive Cancer Centers.

The prestige that comprehensive designation brings to a center is expected to help make Vanderbilt-Ingram even more competitive in recruiting new talent and attracting new funding from both government and private sources.

The center currently receives nearly \$4.3 million each year as its "core grant" to cover the administrative and others costs of


operating a designated center. That grant will be up for renewal in 2003.

In addition, the NCI and other funding sources provide nearly \$75 million to support research and other programs at Vanderbilt-Ingram. One of the requirements of NCI-designated centers is that the majority of

their research funding is awarded through competitive peer-review or equally rigorous mechanisms.

The Vanderbilt Cancer Center was formed in 1993 and two years later was designated by the NCI as a Clinical Cancer Center, which particularly recognized the center's leadership and excellence in basic and patient-oriented cancer research.

Since that time, the center has enhanced its internationally recognized basic cancer research program, added important programs in prevention and epidemiology (the study of large populations for insights into disease), established a pain and symptom management program and launched an active cancer information, education and outreach office.

In 1999, the center was renamed in honor of the late Nashville businessman, philanthropist and Vanderbilt University supporter E. Bronson Ingram, and in recognition of his family's commitment to helping the center's fight against the disease that claimed Ingram's life four years earlier. 

THE BEST MEDICINE

Fred Oliver, shown here with Patient and Family Care Program volunteer Diane Manas and Rose, a wire-haired Fox Terrier, is a VUMC cancer patient who will benefit from the Vanderbilt-Ingram Cancer Center's comprehensive designation.



DANA JOHNSON

match day 2001



PHOTOS BY DANA JOHNSON

* Indicates CRS Scholars

California

Harbor-UCLA Medical Center, Los Angeles
Tyler Barrett, transitional, emergency medicine

UCLA Medical Center, Los Angeles
Wellington Hsu, orthopaedic surgery
Gregory Jack, urology

University of California-Davis Medical Center, Sacramento
Amogh Bhat, internal medicine

University of California-San Francisco
Chad Peterson, psychiatry

Naval Medical Center, San Diego
Don Udall, internal medicine

Children's Hospital, Los Angeles
John Vandoorinck, pediatrics

Colorado

University of Colorado, Denver
Julia Alvarado, internal medicine
Caulley Soto, pediatrics

Healthone Alliance, Denver
University of Washington, Seattle
Bridget Mikysa, transitional, radiology-diagnostic

Connecticut

Yale University, New Haven
Peter Eamranond, internal medicine
Meeta Prasad, pediatrics

Georgia

Emory University, Atlanta
James McGehee, orthopaedic surgery

Hawaii

Tripler Army Medical Center
Jim Eaton, transitional

Illinois

Rush-Presbyterian-St. Lukes, Chicago
Barbara Backer, pediatrics

McGaw Medical Center, Chicago
Phillip Cuculich, internal medicine

Loyola University Medical Center, Chicago
Harrison Le, surgery

Children's Memorial Hospital, Chicago
Jennifer Wambach, pediatrics

Indiana

Indiana University, Indianapolis
Michael Hasty, emergency medicine
Matthew Peterson, surgery, urology

Iowa

University of Iowa, Iowa City
James Saccomando, psychiatry

Louisiana

Louisiana State University, New Orleans
Sachin Vaikunth, general surgery

Maryland

Johns Hopkins Hospital, Baltimore
Bryan Baranowski, internal medicine
Christopher Dull, psychiatry
William Burnette, Neurology-pediatrics

Massachusetts

Metrowest-Framingham Boston University Medical Center
Sarah Bixby, transitional, radiology-diagnostic

Brigham & Women's Hospital, Boston
Massachusetts General
Yenlin Chen, Brig/Faulk Medicine, radiation-oncology*

Baystate Medical Center, Springfield
Annie Lee, general surgery

Deaconess Medical Center, Boston
Amy Lo, internal medicine
Samir Parikh, internal medicine

New England Medical Center, Boston
Hongthao Thieu, obstetrics-gynecology

Massachusetts General Hospital, Boston
Youngho Yoon, pediatrics

Michigan

University of Michigan Hospital, Ann Arbor
Audrey Fan, internal medicine

Minnesota

Mayo Clinic, Rochester
John Fang, medicine, ophthalmology
Trent Smith, internal medicine

Missouri

Barnes-Jewish Hospital, St. Louis
Rajesh Alla, internal medicine
Nitin Anand, internal medicine
Stephanie McAbee, internal medicine
Cheryl Riddle, internal medicine
George Thomas, internal medicine

St. Louis Children's Hospital, St. Louis
Christopher Keefer, pediatrics

New Mexico

University of New Mexico, Albuquerque
Carisa Lee, obstetrics-gynecology

New York

NYP Hospital-NY, Cornell
Gargi Gajendragadk, pediatrics

Stony Brook University Hospital and Medical Center, Stony Brook
Heather McGehean, obstetrics-gynecology

New York University, New York City
Erika Yamada, medicine-primary

North Carolina

Wake Forest University Baptist, Winston-Salem
Mark Billante, orthopaedic surgery

University of North Carolina, Chapel Hill
Carmel Lakhani, psychiatry
Vipul Lakhani, internal medicine

Duke University, Durham
Patrick Pun, internal medicine
Holly Rawizza, medicine-pediatrics

Ohio

University Hospital, Cincinnati
Kevin Joseph, emergency medicine

Oregon

Oregon Health Sciences University, Portland
Meri Todd, pediatrics

Pennsylvania

University of Pennsylvania, Philadelphia
Todd Michener, orthopaedic surgery

South Carolina

Spartanburg Regional Health-SC, Spartanburg, transitional
Vanderbilt, ophthalmology
Cameron Johnson*

Medical University of South Carolina, Charleston
Marcus Moody, surgery, otolaryngology

Tennessee

Vanderbilt University Medical Center
Folosade Aworinde, pediatrics*
Julie Boyd, internal medicine
Matthew Busam, orthopaedic surgery
Nancy Campbell, internal medicine
James Chappell, pathology
Nicole Daamen, surgery
Marc De Jong, internal medicine
Kellie Delozier, obstetrics-gynecology
Sister Mary Diana Dreger, internal medicine

Michael Engel, pediatrics
Robert Garza, surgery
Neil Harris, emergency medicine
John Hassan, surgery, urology
Kent Ishihara, internal medicine*
John Riddick, internal medicine
Jason Schrage, general surgery
Amy Shaw, internal medicine
Angela Singleton, pediatrics

Charles Stevenson, surgery, neurological surgery
Kristina Storck, obstetrics-gynecology
Joyce Teng, pediatrics, dermatology
Carla Tucker, dermatology
Matthew Wilson, internal medicine

Texas

Baylor, Houston
Joseph Chan, internal medicine
Andrea Cruz, pediatrics
Jeffrey Giullian, internal medicine
James Luther, internal medicine
Michael Lyaker, anesthesiology

Texas A&M, Temple
Jeremy Perry, anesthesiology

University of Texas-Southwestern, Dallas
Laura Stobie, medicine, dermatology

Utah

University of Utah, Salt Lake City
Christopher Canale, internal medicine
Katherin Freeman, pediatrics, psychiatry, child psychiatry

LDS Hospital, Salt Lake City
University of Utah
Timothy Sherry, transitional, radiology-diagnostic

Virginia

University of Virginia, Charlottesville
Yasmine Ali, internal medicine
S. R. Evans, obstetrics-gynecology

University of Virginia, Roanoke-Salem
Stanford University
Byard Edwards, medicine, radiology-diagnostic

Riverside Regional Medical Center, Newport News
Tufts New England Medical Center, Boston
Nancy Flattem, transitional, Ophthalmology

Carilion Health System-VA, Roanoke
University of Florida, Gainesville
James Grippo, transitional, radiology-diagnostic

Washington

University of Washington, Seattle
Greg Denhaese, obstetrics-gynecology
Emily Minderman, obstetrics-gynecology
Darryl Wells, medicine-primary

Washington, D.C.

Malcolm Grow Medical Center
Paul Deflorio, transitional

CRS

THE CANBY ROBINSON SOCIETY

SPECIAL SECTION

President's Corner



ANNE RAYNER

This has been a very active year for the Canby Robinson Society. Your generosity has supported 18 doctors-to-be with full tuition scholarships. This community continues to respond to the exceptional work of the Vanderbilt

Medical Center by joining Canby Robinson. We have added 218 new members this year for a total of 1,788 with several weeks left before our books close.

Another confirmation of both Canby Robinson and the Medical Center occurred when three of our graduating senior scholars chose and were chosen for internships at Vanderbilt: great doctors continuing their training here.

This year as our selection committee for new scholars has been reviewing the amazingly talented and dedicated applicants to the medical school, we decided to change

the timing of our scholarship awards from after acceptance by the student to concurrent with acceptance by Vanderbilt. This means we will not only be supporting outstanding young people but we will be aiding our recruitment by early notice of the award of Canby Robinson scholarships.

All in all, a satisfying year, one we can take pride in and in which I'm sure Canby Robinson himself would applaud. **CRS**

Robert E. McNeilly Jr.
President,
Canby Robinson Society

The Canby Robinson Society – A Society of Dreamers and Doers

Vanderbilt Medical Student Scholarship Campaign update

The campaign committee is in the process of identifying one or more representatives of each class to help in the campaign process. If you wish to volunteer your services, or offer other suggestions about the campaign, please contact Dr. Robert Collins at (615) 322-3107.

Our total as of April 25, 2001 is \$23,628,943.39 toward our intermediate goal of \$50 million.

Dean Steven Gabbe joined our faculty and this campaign on March 1. His comments about the importance of this project follow.

Dr. G. Canby Robinson became Dean of the Vanderbilt University School of Medicine in 1920. He realized that to be an effective center of medical education, the medical school and hospital should be housed "under one roof" on the Vanderbilt campus. His dream became a reality in 1925 when the Vanderbilt University Hospital opened adjacent to the Medical School. This model became the template for academic medical centers as we know them today.

The Canby Robinson Society members have expanded their dream of providing 18 full scholarships to extraordinary medical students. Now we are contemplating an endowment campaign that will enable us to

provide financial aid in the form of scholarships for all medical students at Vanderbilt. We recognize the significant burden of debt that most medical students carry when they complete their training. In 1999, the average indebtedness of medical students graduating from Vanderbilt was \$93,000, and it has been estimated that the indebtedness of students completing four years of training at private medical schools exceeded \$100,000 in 2000. This financial burden not only discourages some of the "best and brightest" from applying to medical school but also influences the career decisions of those in medicine.

For example, students facing this debt may decide to begin their practice rather than

pursue a fellowship and a career in research. This choice, while understandable, is a loss for all of us: for medical students, the loss of an opportunity to realize their full potential and, for medicine, the loss of investigators who could advance medical science.

Today, more than 75 years after Dr. Canby Robinson saw his dream realized, the members of the Society that bears his name have the opportunity to make dreams come true for many. I look forward to working with you to make this dream a reality. **CRS**

Dr. Steven G. Gabbe
Dean, Vanderbilt University School of Medicine

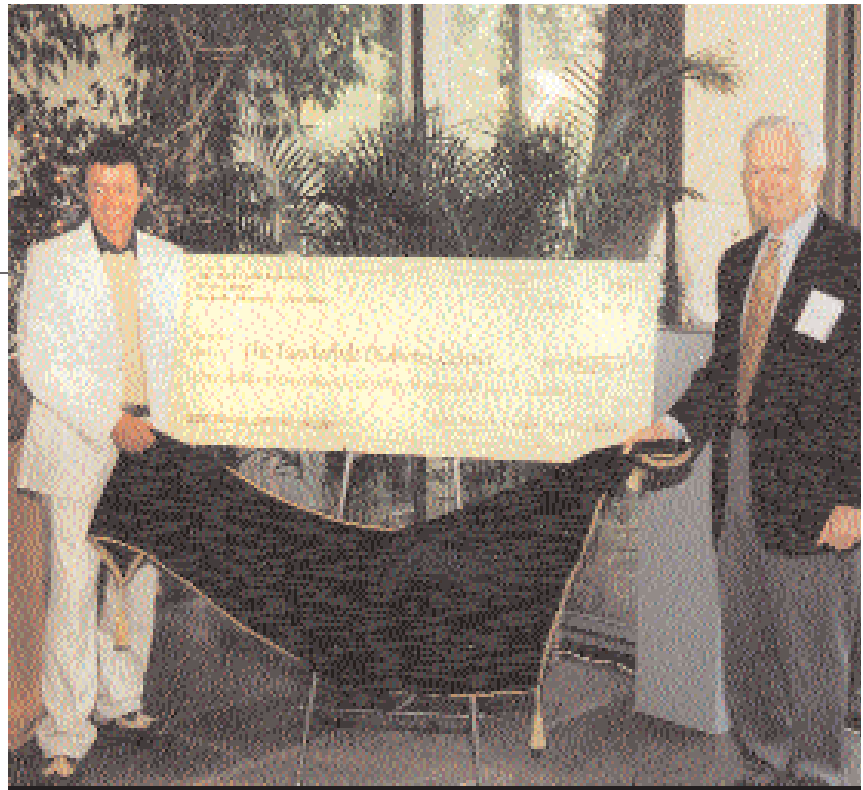
Mark Collie Chair established

The Mark Collie Endowed Chair in Diabetes Research is proof positive that one person can truly make a difference.

Seven years ago, country music singer and songwriter Mark Collie decided he wanted to help find a cure for diabetes. A diabetic since age 17, Collie was all too familiar with the disease and the challenges of living with it. Through the Collie Foundation, he organized the first annual Mark Collie Celebrity Race for Diabetes Cure in 1994. The race brings together music and racing celebrities and has raised more than \$2 million to help fund diabetes research.

"Having so many volunteers come together from the music and motor sports communities to give their time and talent is overwhelming," said Collie, a Canby Robinson Society member. "Their efforts bring us closer to our goal and offer hope that a cure will be found for the millions of children and adults who cope with diabetes daily."

Collie, born and raised in Waynesboro, Tenn., moved to Nashville in 1982 to pursue a career in country music. He began as a songwriter for artists like Alabama and George Jones and eventually went on to record four albums of his own, which earned him 10 top 20 singles. Collie also acts, produces and writes for television and film. His short film "I Still Miss Someone" won the Tennessee Spirit Award for Best Short



DANA JOHNSON

Mark Collie, left, presents a check for \$1,250,000 to Dr. Darryl Granner and the Vanderbilt Diabetes Center for the Mark Collie Endowed Chair in Diabetes Research.

Film at the Nashville Independent Film Festival.

With success under his belt, Collie turned his attention to diabetes. He quickly dedicated himself to raising money to support the efforts of the Vanderbilt Diabetes Center.

"They are doing great things in the Vanderbilt Diabetes Center, and I am very proud to help keep those things going," Collie said.

"Mark has really brought diabetes awareness to the Nashville community. His efforts have not only helped us continue our research, but also helped many people in the community control their own disease," said Dr. Daryl K. Granner, director of the Vanderbilt Diabetes Center. "The Collie Foundation should be proud of the first endowed chair in the Diabetes Center. Most chairs come from a single donor. The money for this chair was raised by common people who

decided to do something to make a difference, and it is unique for that reason."

The Mark Collie Chair in Diabetes Research, which will be formally dedicated this summer, will go to an individual who will be recruited to the VUMC faculty. The funds that the chair provides may be used at the faculty member's discretion in his or her research program.

"It is research that leads to knowledge and knowledge that leads to a cure," said Dr. John E. Chapman, associate vice-chancellor for Medical Alumni Affairs and former dean of the Vanderbilt University School of Medicine. "Mark's efforts toward helping us continue our research are appreciated." **CRS**

-KATHLEEN WHITNEY

Ruth “Skeeter” Scoville honored



Dr. Addison B. Scoville Jr. and his widow Ruth King (Skeeter) Scoville shared many things in common throughout their 57 years of marriage.

Now they have one more. The Justin Potter Foundation, which donated a chair in honor of Scoville in June 1985, recently donated a chair in honor of Ruth “Skeeter” Scoville.

The Ruth King Scoville Chair in Medicine honors a woman, who with her husband, “has done the work of the University as a joy and as a commitment,” said Dr. John E. Chapman associate vice chancellor for Medical Alumni Affairs and former Dean of the School of Medicine. The chair will support the recruitment of a distinguished faculty member to the division of Diabetes, Endocrinology and Metabolism.

“This is a tremendous thrill and honor for me,” said Ruth, a Canby Robinson Society member who earned her BA from Vanderbilt University in 1941. “My love and respect for Vanderbilt University Medical School and Hospital goes back to the days when the buildings were located on the south campus.”

The Scovilles married in 1941 and together grew in their commitment to Vanderbilt. Dr. Scoville was renowned for his dedication to the treatment of

(continued on next page)

From dismal to delightful

As you walk through the Vanderbilt Clinic and enter the Diabetes Center, located across from the cafeteria on the second floor, you will notice a dozen or so photographs of wildflowers and birds displayed on the walls.

The photographer, Miriam Weinstein, felt a deep connection to nature and to the Diabetes Center, and the display is representative of those two things dear to her heart. Miriam, a Canby Robinson Society member until her death on Feb. 24 at the age of 86, was the wife of the late Dr. Albert Weinstein, a VUMC faculty member from 1935 to 1963.

Weinstein was known for his work in the field of diabetes and was honored by the establishment of the annual Albert Weinstein Lectureship by the Vanderbilt University School of Medicine.

Miriam was a vivacious presence at the two-day lectureship, according to Dr. Daryl K. Granner, director of the Diabetes Center, and became “the

matriarch of the event.”

“After her husband died, Miriam, who was in her 60s at the time, enrolled in photography classes and became a very good photographer,” Granner said. “She traveled quite a bit and took pictures along the way. We would talk about her photos at the dinner following the lectureship, and I suggested that perhaps she would loan us a print or two for our Diabetes Center, which was dismal and unadorned. Miriam and her family were thrilled by the idea.”

Miriam ended up donating all of the photos in her collection to the Diabetes Center and was present at the dedication of the display, held on her birthday on Aug. 14, 1998. Because of her generosity and dedication to Vanderbilt and the Diabetes Center, the annual lectureship has been renamed the Albert and Miriam Weinstein Lectureship in Diabetes.

CRS

-KATHLEEN WHITNEY

A life of philanthropy

Noah Liff, former CEO of Nashville's Steiner-Liff Iron and Metal Co. and a longtime supporter of Vanderbilt University Medical Center, died on May 3, 2001 after suffering from a brain tumor for a year. He was 72.

A resident of Nashville for almost 50 years, Liff and his family started a scrap business on the Cumberland River that later became the Steiner-Liff Iron and Metal Co., one of the largest recycling companies in the United States. He ran the company until 1997.

Liff devoted much of his life to philanthropy. In addition to being a lifetime member of the Canby Robinson Society, Liff also gave the seed money for the Nashville YWCA's first domestic violence shelter and for its displaced homemakers program. He also arranged to send American equipment to Ukraine to clean the milk when he learned that children near

Chernobyl, the site of the world's worst nuclear disaster, were drinking contaminated milk.

He was active on several local boards, many which he helped fund, including the Nashville Area Chamber of Commerce, W.O. Smith School of Music, Theatre Nashville, the Rape and Sexual Abuse Center, Jewish Federation of Middle Tennessee, Metro Arts Commission, Nashville Symphony and the Nashville Opera Association. He received numerous honors and awards, including the Joe Kraft Award given by the Community Foundation of Middle Tennessee and the Human Relations Award of the National Conference of Christians and Jews.

Liff is survived by his wife, Judith; children, Darren, Zachary, Daniel, Adam, Terence and Jan, all of Nashville, and three grandchildren.

CRS



THE 2001 CANBY ROBINSON SOCIETY'S IDEAL PHYSICIAN AWARD was given to **Andrea Cruz**. Cruz will be serving her residency in pediatrics at Baylor College Medical Center in Houston.



The graduating Canby Robinson Scholars gather one last time for a photograph. From left to right, they are: Kent Ishihara, Yenlin Chen, Cameron Johnson and Folasade Aworinde.

Scoville *continued*

diabetes and for his contributions to Vanderbilt's clinical, educational and research missions.

"My husband was intensely interested in research being done, in new appointments and in all aspects of growth in this great institution, and he shared his interest with me," Ruth said. "When he was asked to serve on the committee for the selection of Justin Potter scholars, he asked me to help him, and I was only too happy to become involved."

Dr. Scoville died in 1998 and Ruth remains in close contact with her Vanderbilt friends in addition to pursuing her interests in golf, genealogy and bridge. CRS

-KATHLEEN WHITNEY

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



alumni journal

CONTINUOUS CHANGES AT THE MEDICAL CENTER

The medical center is ripe for change this summer. Dr. Steven G. Gabbe assumed his duties as the 10th Dean of the Vanderbilt University School of Medicine. He came from the University of Washington, in Seattle, where he had established himself as one of the most respected perinatologists in the United States and a member of the prestigious Institute of Medicine. Dr. Gabbe is one of the world's leading experts in diabetes during pregnancy. "In recent years, he has turned his interest toward medical education and has shown remarkable talents in these areas," said Dr. Harry R. Jacobson, Vice Chancellor for Health Affairs.

As Dr. Gabbe moved into the Dean's office in March, the former occupant, Dr. John E. Chapman moved out to become Associate Vice Chancellor for Medical Alumni Affairs. In this role, he will continue his contact with the many alums who have graduated during the last 25 years of his deanship. Dr. Chapman also plans to be involved in raising funds for medical scholarships and several other development projects. He and his wife, Judy Jean, were honored by a two-day series of programs culminating in a black tie gala attended by over 1,000 colleagues, students and leaders in medical education.

Also in March, U.S. Sen. Bill Frist announced that the Vanderbilt-Ingram Cancer Center has been classified a Comprehensive Cancer Center, which is the highest designation awarded by the National Cancer Institute.

In other news, Dr. James A. O'Neill, Jr., John Clinton Foshee Distinguished Professor of Surgery and Director of the Division of Surgical Sciences, will retire July 1, 2001. Dr. O'Neill and his wife Susan were recently honored at a black-tie gala attended by over 200 colleagues, residents, friends and distinguished surgeons from all sections of the country. During his tenure, the Department of Surgery enhanced its national reputation and increased its number of faculty as well as its research and education grant funding. He will remain active at Vanderbilt in finalizing plans for the development of surgery at the new Children's Hospital, now under construction. Dr. R. Daniel Beauchamp, who has had a distinguished surgical career at Vanderbilt and who has developed an international reputation, will succeed Dr. O'Neill.

MEDICAL ALUMNI VISITATIONS

We continue to enjoy visiting alumni/alumnae in different sections of the country. This spring we were pleased to attend receptions and dinners in New Orleans,

Jackson, Miss., Washington D.C., Philadelphia, Jacksonville, Fla., and Charleston, S.C. Next spring we will visit our medical alumni on the West Coast.

MEDICAL ALUMNI ASSOCIATION BOARD MEETING

A board of directors' retreat was held on Kiawah Island in May. This meeting provided a wonderful opportunity for representatives from across the country to hear about current activities at the Medical Center, its future plans and to provide suggestions for the administration. Congratulations to Dr. Lawrence K. Wolfe who was elected President-elect of the Medical Alumni Association and will assume the presidency when President Joseph F. Arterberry concludes his term at the next Medical Reunion in October 2002. ♥

Best regards,

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

Faculty News • Alumni News

Faculty News

***Dr. Jeffrey R. Balsler, MD'90, *Dr. R. Daniel Beauchamp, Dr. Sergio Fazio and *Dr. Macrae F. Linton, '85-'87,** were recently inducted into the American Society for Clinical Investigation. The ASCI, founded in 1908, has 2,600 physician-scientist members. Members are chosen based on their records of scholarly achievement in biomedical research.

***Dr. Kenneth L. Brigham, MD'66,** Ralph and Lulu Owen Professor of Pulmonary Diseases, has written a personal, in-depth look at his diagnosis with prostate cancer in 1996. The book "Hard Bargain – life lessons from prostate cancer...a love story," is the result of a journal that Brigham kept soon after his diagnosis. The book is available in Nashville bookstores and through the publishing company's web site, harpethhouse.com

***Dr. Arthur C. Fleischer, HS'76-'79, F'80,** professor of Radiology and Radiological Sciences, and Obstetrics and Gynecology, is a recipient of an American Institute of Ultrasound in Medicine Education and Research Fund grant for his project "Sonographic Depiction of Tumor Vascularity and Flow: Comparison with MRI and FDG (Metabolic) Scanning in an Animal Model."

Heidi E. Hamm, Ph.D., professor and chair of Pharmacology, presented the Fritz Lipmann Lectureship at the 2001 annual meeting of the American Society for Biochemistry and Molecular Biology in Orlando on Apr. 1, 2001. The title of her lecture was "Regulation of G Protein-mediated Signal Transduction."

Dr. Terence S. Dermody, associate professor of Pediatrics, Microbiology and Immunology, has been selected to serve on a committee responsible for the development of the United States Medical Licensing Examination. As a member of the Step 1 Test Material Committee for Microbiology, Dermody will be participating in the development of high quality items for the first examination in the USMLE sequence.

***Dr. John H. Exton,** professor of Molecular Physiology and Biophysics and Pharmacology, and Howard Hughes Medical Institute investigator, has been elected to the prestigious National Academy of Sciences. The Academy elected 72 American members and 15 foreign associates in recognition of their distinguished and continuing achievements in original research. Election to the Academy is considered one of the highest honors a scientist can achieve. Exton is the fifth Vanderbilt faculty member to be elected to the Academy. He joins Stanley Cohen, Ph.D., Dr. William J. Darby, Jon H. Kaas, Ph.D. and Dr. Charles R. "Rollo" Park.

Dr. Alfred L. George Jr., HS'82-'85, and Dr. L. Jackson Roberts II, F'75-'76, were recently inducted into the Association of American Physicians. The AAP was established in 1885 for the advancement of scientific and practical medicine. Members are recognized for the pursuit of medical knowledge and the advancement through experimentation and discovery of basic and clinical science and its application to clinical medicine.

***Dr. J. Harold Helderman,** professor of Medicine and medical director of the Vanderbilt Transplant Center, has been appointed by Secretary of Health and Human Services Donna E. Shalala to a new advisory committee on Organ Transplantation. The committee will advise the secretary on all aspects of organ procurement, allocation and transplantation including independent review and advice on organ allocation policies developed by the nation's transplantation network.

Brigid L. M. Hogan, Ph.D., Hortense B. Ingram Professor of Molecular Oncology and Howard Hughes Medical Institute investigator, has been elected to the Royal Society, the world's oldest scientific academy. She joins the ranks of an organization, which has counted as Fellows the eminent scientists Isaac Newton, Charles Darwin and Albert Einstein.

Dr. Lewis B. Lefkowitz, professor of Preventive Medicine was honored in March when the new homeless respite care program at the Vine Hill Community Clinic was named in his honor. Lefkowitz has officially served as the medical consultant for the program, run by Nashville's Campus for Human Development, since 1999, but has helped train Vanderbilt medical and nursing students to care for economically disadvantaged populations, including Nashville's homeless community, since the late 1970s. Lefkowitz was awarded the title of Professor of Medicine, emeritus at commencement and plans to retire from the Vanderbilt faculty in June. He has been on the faculty since 1965.

***Dr. Harold L. Moses, MD'62, HS'62, '64,** director of the Vanderbilt-Ingram Cancer Center, was invited by former President George Bush and his wife, Barbara, to participate in the "National Dialogue on Cancer." The Bushes are co-chairs of this initiative, the brainchild of a group of cancer leaders. The group met in Washington, D.C. on May 4.

***Dr. James A. O'Neill Jr., HS'59-'64,** John Clinton Foshee Distinguished Professor of Surgery and director of the Section of Surgical Sciences, was honored in April as part of the H. William Scott Jr. Society annual scientific sessions. O'Neill delivered the 49th Barney Brooks Lecture and was honored at a black-tie dinner at the Country Music Hall of Fame. He has led the department since 1995 and will step down as director on June 30, 2001. During O'Neill's tenure, the department increased its number of clinical faculty as well as its research and education grant award funding.

***Dr. Dan M. Roden, F'78-'80,** has been awarded a Bristol-Myers Squibb Unrestricted Cardiovascular Research Grant. The five-year \$500,000 grant comes with no-strings-attached. He plans to use the award to study the genetic variability that affects how individual patients respond to drugs. Roden is William Stokes Professor of Experimental Therapeutics, Medicine, and Pharmacology and also serves as director of the division of Clinical Pharmacology.

Dr. Lewis Lefkowitz and his wife, Judy, read the plaque that will be installed in his honor at the homeless respite care program at Nashville's Vine Hill Community Clinic.



DANA JOHNSON

*Indicates CRS member

Alumni News

'46

***Dr. Henry C. McGill Jr., MD'46, HS'46**, a pathologist at the University of Texas Health Science Center in San Antonio, was featured in the November 2000 issue of *Mens' Health*. McGill's study reviewed 760 postmortems of young men between the ages of 15 and 34 and found that one out of five men in their early 30s had already developed a dangerous heart blockage. They also had low levels of high-density lipoprotein or HDL cholesterol.

'58

***Dr. Paul H. Barnett, MD'58** has been appointed clinical professor of Medicine at Vanderbilt University Medical Center. He and his wife, Paula, have four grandsons, Matthew, Jacob, Peter and Reed, all Commodore fans. Barnett practices internal medicine in Nashville.

'59

Dr. Warren A. Weinberg, MD'59, HS'59, is a professor of Pediatrics at University of Texas Southwestern and has been recognized with special honors by the Learning Disabilities Association of Texas for his ongoing work for the organization. He also serves on the association's Professional Advisory Board and Annual State Conference Program Committee. The award credited him with helping make the association's annual conference one of the most successful in the nation.

'61

***Dr. Richard B. Johnston Jr., MD'61, HS'61-'63**, has returned to Denver where he is professor of Pediatrics at the University of Colorado School of Medicine. He is a member of the Institute of Medicine of the National Academy of Science and recently chaired the IOM committee on Asthma and Indoor Air as well as the committee on research strategies for Multiple Sclerosis. He is a member of the Vanderbilt Medical Alumni board of Directors.

'68

***Dr. G. Patrick Maxwell, MD'72, CF'82-'89**, was named one of the top plastic surgeons in the United States last year by *Time* and *Country* magazine. He was recently listed by *W Magazine* as one of the top plastic surgeons in the world. Maxwell practices in Nashville.



DANA JOHNSON

A KEY MOMENT

Former Dean John E. Chapman, right, passes the keys to the Dean's office to the medical school's new dean, Dr. Steven Gabbe.

'72

***Dr. A. Everette James Jr., FA'75-'89**, has turned his interest from radiology to art. James, the former chairman of Radiology and Radiological Sciences at VUMC, is now a resident of Chapel Hill, N.C. and has founded St. James Place, a museum in Martin County, N.C., devoted to Southern folklore. He has written numerous articles on art, folklore, folk art and fiction. Most recently he has published "American Art: Thoughts of a Collector" and "Tales of the Dismal Swamp."

'91

Dr. Benjamin B. Peeler, MD'91, HS'91-'98, served a cardiothoracic surgery fellowship at the University of Virginia from 1998-2000 and a vascular surgery fellowship from 2000-2001. He is currently serving a congenital heart surgery fellowship at Emory University and will return to the University of Virginia in the summer of 2002 as an assistant professor of Surgery.

'94

Dr. Sunil K. Geevarghese, MD'94, HS'94-00, has completed his general surgery training at Vanderbilt and is completing the first year of a fellowship in multi-organ transplantation at UCLA Transplant Center. He and his wife, Liby, have a three-year-old daughter, Sanjaly.

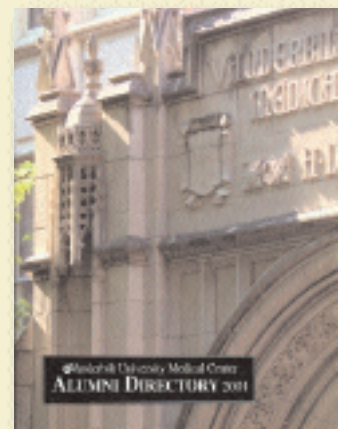
Dr. Matthew F. Halsey, MD'94, has a son, John Frederic, born in 1998 and a daughter, Rowan Grace, born in 1999. He completed his orthopaedic residency in June 2000 at Stony Brook, NY and is currently serving a pediatric orthopaedic fellowship at Shriners' Hospital in Portland, Ore.

'98

Dr. Robert Reese Newsome, MD'98, was commissioned as a captain in the U.S. Army Reserve on Feb. 19, 2000. He is currently a resident in the Department of Radiology at Tulane University Medical Center.

It's here!

The new alumni directory is here. If a subscriber failed to receive an ordered copy, please contact Dr. George Holcomb at 1-800-288-0266 or (615) 322-6146.



In Memoriam



Dr. Robert L. Ammarell, HS'77-'79, died Jan. 22, 2001. He was 50. He is survived by his wife, Beverly Deal Ammarell, sons, Robert and Tyler, and daughter, Elizabeth.

Dr. Ralph Cash Sr., MD'40, died on March 11, 2001 at his home in Princeton, Ky. He was 86. He retired from the family medical and surgery practice that he had taken over from his father in 1946. He was a World War II Army veteran, attaining the rank of captain in the Army Medical Corps. He was the recipient of the American Defense Medal, Battle Star of Pearl Harbor, Battle Star for the Battle of Guadalcanal, and in the European Theatre, the Battle Star of Central Europe under the American Victory Medal. He was the recipient of the 1969 AMA Physician's Recognition Award. He is survived by two daughters, Betty Lou Walsman and Martha Ann Presler, two sons, Ralph L. Cash Jr. and James Butler Cash and nine grandchildren.

John G. Coniglio, Ph.D., FA'51-'90, died Feb. 26, 2001. He was 81. He served on the faculty of the Department of Biochemistry until his retirement in 1990, serving as interim chairman of the Department in 1972-73. He was appointed emeritus professor when he retired. His basic science research was in the field of lipid chemistry and metabolism. In 1969 he was appointed associate editor of the journal *Lipids*. He received the university's Thomas Jefferson Award in 1978. The department of biochemistry bestows the John G. Coniglio Prize in Biochemistry each year to the graduating medical student who has most distinguished himself or herself in biochemistry. He is survived by his wife, Carmen, sons, John William, Robert and David, and five grandchildren.

***Dr. H. Lee Large Jr.**, MD'42, HS'42-'43, died Feb. 19, 2001 in Charlotte, N.C. He was 82. Large served in the U.S. Army during World War II in General Patton's Third Army in the Medical Corps, participating in the Normandy Invasion and the Battle of the Bulge. He was a recipient of a Bronze Star, He served as pathologist in chief at Presbyterian Hospital from 1952-1975 and served as a general pathologist there from 1975 until his retirement in 1985. He is survived by his wife, Iris.

Dr. Fred V. Lucas, MD, FA'77-89, died on July 2, 2000. He was 78. He retired as associate vice chancellor of medical affairs at VUMC in 1991 and moved to Baton Rouge. He is survived by his wife of 52 years, Rebecca, a daughter, Katharine, and a son, Dr. Fred V. Lucas, Jr.

Dr. Dallas B. Reynolds, MD'43, HS'43, '46-'47, died March 3, 2001 in Huntsville. He was 81. He was one of the first board-certified ob/gyn physicians in northern Alabama. He practiced medicine in Huntsville from 1953 until his retirement in 1988. It is estimated that he delivered 12,000 to 13,000 babies in his career. He was a member of the American College of Surgeons, the American College of Obstetrics and Gynecology. He was awarded the Bronze Star in World War II. Survivors include his wife, Lorene, two daughters, Miriam Keat and Ann Speed, two sons, John and Dr. James A. Reynolds, MD'82, and five grandchildren.

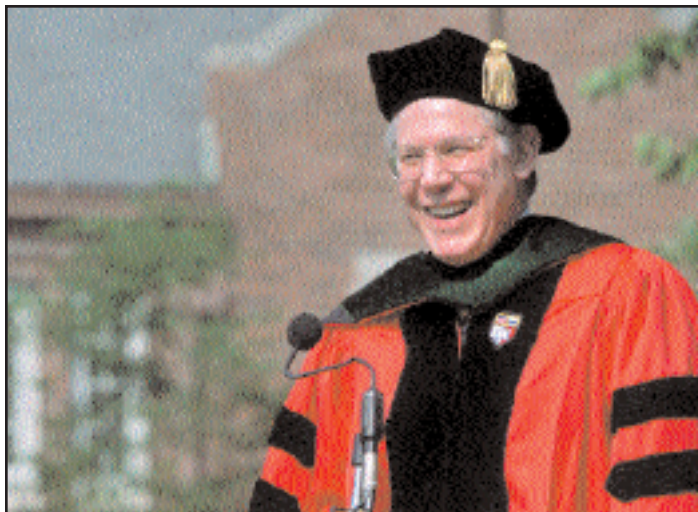
***Dr. Bertram E. Sproffkin**, MD'42, HS'42, '46-'48, FA'52-'59, 62-'63, '78-'79, CF'62-'01, died Jan. 25, 2001. He was 83. He was the Founder's Medalist of the Class of 1942. A decorated World War II veteran and respected teacher and physician, he took up swimming in his 70s and swam competitively, winning several medals.

Dr. John R. Woods Sr., MD'43, FA'70-'82, died Jan. 19, 2001. He was 85. He moved to Ocala, Fla. 12 years ago from Nashville. He was a U.S. Army veteran of World War II and the Korean War and was awarded the Asiatic-Pacific Theater Victory Ribbon for his service during the Central Burma campaign. He is survived by his wife of 58 years, Carrie, a daughter, Charlotte, three sons, John, Richard and Philip, seven grandchildren and four great-grandchildren.



SNEAK PEAK

Faculty and Staff enjoy a look at the new LifeFlight helipad on top of Vanderbilt University Hospital. The new operation is improving the efficiency and response time of the LifeFlight operation.



Dean Bonnie Miller, Class President Kevin Joseph and Deans Deborah German, John Chapman, Steven Gabbe and Gerald Gotterer pose for a graduation photograph.

Dr. Steven Gabbe acknowledges the Class of 2001 during his first university commencement ceremony.



Vanderbilt University Medical Center Graduation

2001



Dr. Frank Riddick, the Class of '54 Founder's Medalist, hugs his son, John Riddick, a Class of '01 graduate.



Kristina Storck celebrates with her classmate and fiancé Matthew Hassan during the commencement ceremony.



The 2001 medical school Founder's Medalist was Samir Parikh.

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