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Vanderbilt Medicine

SPRING 2006

escaping the
agony of
addiction

looking ahead

Reunion 2006 (Oct. 19-21)

Preparations for Reunion 2006 are under way, and all Vanderbilt Medical Alumni are invited to participate in this three-day event. Many thanks to our Reunion 2006 Chairs.

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EDITOR

Nancy Humphrey

DIRECTOR OF PUBLICATIONS

MEDICAL CENTER NEWS AND PUBLIC AFFAIRS

Wayne Wood

CONTRIBUTING WRITERS

Carole Bartoo
Craig Boerner
Doug Campbell
Nancy Humphrey
Leigh MacMillan
Melissa Marino
Lyn Noland
Elizabeth Older
Jessica Pasley
Kathy Whitney

PHOTOGRAPHY/ILLUSTRATION

Dean Dixon
Dana Johnson
Kristina Krug
Tommy Lawson
Anne Rayner
Maria Rendon
Michael Woloschinow

DESIGN

Diana Duren/Corporate Design, Nashville

COVER ILLUSTRATION

Michael Woloschinow

EDITORIAL OFFICE

Office of News and Public Affairs
CCC-3312 Medical Center North
Vanderbilt University
Nashville, Tenn., 37232-2390

VANDERBILT MEDICAL ALUMNI ASSOCIATION

D-8200 Medical Center North
Nashville, TN 37232-2106
(615) 322-6146
(800) 288-0266
Fax: (615) 322-1892
e-mail: medalum@vanderbilt.edu
Visit us at: www.mc.vanderbilt.edu/alum-affairs

:: on the cover

Addictions are a plague on the health and well-being of individuals, families and American society. Escaping isn't easy, but it's possible.



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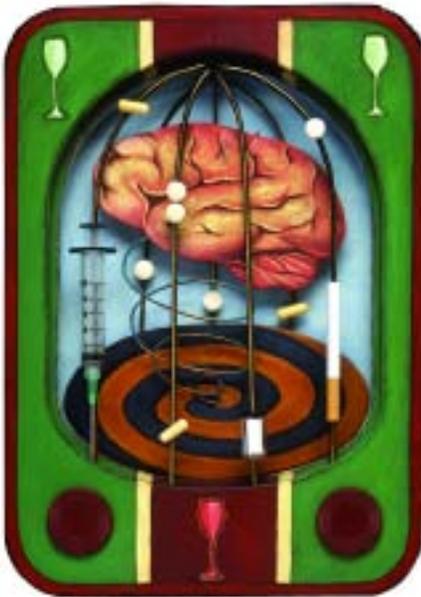
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BY HARRY R. JACOBSON, M.D.
Vice Chancellor for Health Affairs

I wonder sometimes just how far we've come

DEAN DIXON



in understanding addicts and addictive behavior. I listen to my colleagues talk about patients whose lives have been torn apart by addictions to cigarettes, alcohol, and drugs of abuse like meth and crack. Underlying much of the discussion is blame, pure and simple. That these diseases are afflictions of volition, failures of will and flaws in the addict's character is still powerfully held.

As physicians we need to look further. This issue of *Vanderbilt Medicine* takes a closer look. Diseases of excess have become extraordinarily costly, whether it is the addictive diseases that most quickly come to mind, like alcoholism, drug abuse and smoking – or those like obesity, gambling or sexual addiction that present very differently. In medicine we look for ways to make a difference. Studying addiction and helping people conquer that self-inflicted disease may be one of the most robust targets of opportunity in modern medicine.

Addictions are insidious. They hijack the very machinery that has helped mankind survive and flourish as a species, and turn it to very destructive purposes. What we have learned is that addiction exploits neural pathways that reinforce

the very behaviors that have helped us survive – the ones that cause us to seek food or mates.

These addictive behaviors reward with pleasure, and the behaviors are reinforced with powerful influences on neural plasticity that ingrain them as learned behaviors. The studies of learning and addiction are interestingly interwoven. Knowing more about how we learn opens new and intriguing targets for exploration in addictions.

How do addictions habituate and why is this particular sort of learning so hard to undo? Why are some of us more susceptible to addictive behavior? Addictions quite clearly run in families. Is there a genetic predisposition that can be identified? And how important is personal responsibility and self-control? Divining how each of these factors influence addiction is an exciting and valuable field of discovery. **VM**

Device offers critically ill heart patients new option

Vanderbilt University Medical Center is the first in the region to offer a potentially life-saving treatment option for severe heart failure patients too sick to undergo surgical interventions.

The treatment is the TandemHeart, a fist-sized ventricular assist device that is inserted percutaneously in the most critically ill cardiac patients.

The primary advantage of this device is that it does not require surgery.

"Conventional left ventricular assist devices (LVADs) require surgery," said David Zhao, M.D., director of the Cardiac Catheterization Lab and Interventional Cardiology. "In the past we cut the chest open, exposed the heart and inserted the LVAD. Now this device can be inserted using a percutaneous technique in the Cath Lab without doing surgery.

"We are able to use this device as a temporary bridge so that a patient can recover some heart function. Previously, with no other options, a patient who was too sick for a surgical implantation of an LVAD or another invasive procedure would die. This allows us to give that patient a chance," Zhao said.

TandemHeart is a short-term support device that allows the body to regain a normal blood circulation in minutes. The three-part system includes a pump, a cannula set and a system controller.

The most prevalent uses will be in patients who have bypass, heart valve or open heart surgery, patients who need very short-term bridging before receiving a longer-term LVAD and patients undergoing high-risk angioplasty or stenting, to help rest the heart and provide a margin of safety during the procedure.

Thomas DiSalvo, M.D., the attending physician for Vanderbilt's first TandemHeart recipient, commended the multidisciplinary team effort as a "testament to Vanderbilt's commitment to innovation in cardiovascular disease that will help our patients have better outcomes." **VM**

-JESSICA PASLEY

News and happenings at Vanderbilt Medical Center

Student-led study spurs move for state meth protocol

Vanderbilt University School of Medicine student Lara Bratcher has documented a lack of consensus among Tennessee doctors about how to treat children who may have been exposed to the illicit drug methamphetamine and its harmful manufacturing process.

Based on the second-year student's survey, officials at the Monroe Carell Jr. Children's Hospital at Vanderbilt are taking the lead in developing statewide treatment guidelines to help close this gap in care.

Bratcher, who grew up in McMinnville, Tenn., near one of the most active areas for meth labs in the state, surveyed emergency department directors and physicians at hospitals in 12 Tennessee counties where children have been deemed to be at high risk of being exposed to the manufacture of methamphetamine. Many children in those counties show up in emergency departments after their parents have been arrested for having a meth lab in their home.

Bratcher came up with signs that might indicate exposure to meth, or the chemicals used to make it. Signs include a chemical smell on the child's clothing, rapid breathing and/or high blood pressure. Physicians were asked to describe how they would assess the significance of the exposure and to report what they would do to test or treat the child.

The responses ran the gamut. Bratcher said she expected to find a lack of consistency in the treatments reported, but she was astonished to find so much variety, followed by an overwhelming majority who reported feeling that there was little existing medical knowledge or consensus about how to treat these children. Ninety-two percent of those surveyed said they would like to have a more formal protocol for treating children who may have been exposed to meth. **VM**

-CAROLE BARTOO



Lara Bratcher with
Chris Greeley, M.D.

Storm-tossed residents find a home at VUMC

Sixteen physicians working to complete residencies in New Orleans when their facilities were destroyed by the most destructive and costliest natural disaster in U.S. history carried on their training at Vanderbilt University Medical Center.

Considering the devastation and losses some witnessed and experienced, compounded by the uncertainty of rebuilding or starting over in other cities, their lives after Hurricane Katrina struck were in a whirlwind.

Jennifer McGee, M.D., a 33-year-old Cookeville, Tenn., native, evacuated critical care patients from Charity Hospital to Tulane through the flooded streets of New Orleans last August.

"We had limited resources and there was some difficulty with communication with FEMA, so physicians at Charity were helping to evacuate critical care patients over to Tulane," she said.

Patient evacuations from Charity Hospital were halted after the facility came under sniper fire twice.

"Everyone at Vanderbilt has been very accommodating, very receiving," she said.

Cardiology resident Jonathan MacCabe, M.D., who was moonlighting in Thibodaux, La., said he barely made it out of town before the storm. His home, although a couple of miles inland and 5 to 10 feet above sea level, was a total loss.

Residents from Tulane University and the Ochsner Clinic Foundation (OCF) underwent an extensive approval process overseen by the Accreditation Council for Graduate Medical Education (ACGME) before receiving temporary assignments, said Fred Kirchner, M.D., VUMC Associate Dean for Graduate Medical Education.

"The word went out and, although the visiting residents comprised seven specialties, virtually all our training program directors offered to provide temporary training positions," Kirchner said. "Also, a number of current and local Vanderbilt alumni offered housing." VM

—CRAIG BOERNER

Medical students' Web site gaining national notice

A new Careers in Medicine Web site created by Vanderbilt University School of Medicine (VUSM) students is being used as a national model for assisting physicians-in-training as they choose a career from more than 108 specialties and sub-specialties in medicine.

Vanderbilt Assistant Dean for Medical Student Affairs Scott Rodgers, M.D., and VUSM second-year student Sanjay Patel simply wanted to keep students "informed," but the concept was featured in a presentation last fall at the American Association of Medical Colleges (AAMC) meeting in Washington.

Careers in Medicine is a national program sponsored by the AAMC, and individual universities are encouraged to create student organizations that link to the national initiative.

"Sanjay did the AAMC presentation ... it was well-attended, well-received, and afterwards we actually had schools calling us because they wanted to create their own Web sites based on our model," Rodgers said.

"It made me feel really good because I feel like our students came through for the school, and I really believe it is making a difference."

Several things make the Vanderbilt Web site unique, beginning with the idea that the information is entered and updated by students.

Each specialty page contains a description of that career and contact information for the residency director, faculty advisers, and students with the same interests. An events page is updated with items of interest for all medical students and a virtual clock in the bottom left-hand corner of the home page provides a "Countdown to Match Day."

There is also an "Ask the Experts" feature, which gives students an interactive platform to ask questions anonymously. Each week is devoted to a different specialty and the questions and answers are archived for future reference.

Rodgers said the site has enabled him to tailor his approach to students when he has one-on-one career counseling sessions.

"When I go to them I know exactly what they are hearing and what they have read online and then I can really focus my efforts. I just feel like our job with counseling in careers is to keep the students informed," he said. VM

—CRAIG BOERNER



Scott Rodgers, M.D.,
with VUSM student
Sanjay Patel.

Vanderbilt clinic takes on Hispanic diabetes epidemic

For Michael Fowler, M.D., Tuesday is often the longest and most rewarding day of the week.

After a full day of work at Vanderbilt, Fowler heads to the Siloam Clinic in Nashville to combat an enemy that is threatening the health of the fastest-growing population group in the United States – Hispanic-Americans.

That enemy is diabetes, and it is advancing at an incredible pace.

According to the National Institute of Diabetes and Digestive and Kidney Diseases, Hispanics are nearly twice as likely to develop diabetes as white, non-Hispanics. About 2.5 million Hispanic-Americans have been diagnosed with the disease, and millions more may have it without knowing it.

“Diabetes is flourishing, not only in the general population, but especially in the Hispanic-American community,” said Fowler, an assistant professor of Medicine in the Division of Endocrinology, Diabetes and Metabolism.

Diabetes in this population likely results from a combination of factors – genetics, a diet traditionally high in calories and carbohydrates, and lower levels of leisure time and physical activity than other U.S. ethnic groups.

Their adoption of an “American” lifestyle after entering this country prompts a rapid rise in disease incidence.

“I think we should hand out diabetes medicines at the border, when people come into the country,” Fowler said.

The impact of this epidemic is felt at the Tuesday night clinics, Fowler says.

“It’s always a packed house. It’s just a question of how many hours we are able to spend (at the clinic). The human need outstrips the supply at this point.”

While his efforts at Siloam continue, Fowler is working to establish a practice

at the Vanderbilt Eskind Diabetes Clinic, specializing in treating diabetes in the Hispanic population. Through advertising campaigns in Spanish newspapers and simple ‘word-of-mouth,’ Fowler hopes to draw Spanish-speaking patients to Vanderbilt for their diabetes care. This could help lighten the load on the Tuesday night clinics at Siloam and also reach out to those who have not yet sought treatment for their diabetes.

“Michael’s service to underserved groups represents an important component of the outreach that we want to be about in the Diabetes Clinic,” said Tom Elasy, M.D., M.P.H., medical director of the Vanderbilt Eskind Diabetes Clinic.

Fowler recently secured grant support to systematically study how best to design, implement, evaluate and sustain these types of services between the clinic and the community. **VM**

—MELISSA MARINO



Michael Fowler, M.D., with patient Rosalea Rodriguez.

DANA JOHNSON

‘Last resort’ surgery holds promise for shoulder patients

A severely torn rotator cuff has traditionally translated into a lifetime of nagging pain for patients and a limited range of motion that’s mostly beyond repair for surgeons.

But Vanderbilt University Medical Center’s John Kuhn, M.D., associate professor and chief of Shoulder Surgery in the Department of Orthopaedics, is now offering the prospect of a “last resort” measure in certain cases.

Called “reverse ball and socket arthroplasty” (joint replacement), Kuhn is placing the shoulder ball and socket replacement in their anatomical opposite positions in order to relieve pain and restore function to the shoulder.

Kuhn, one of only three surgeons in Tennessee performing the procedure, has performed the new technique on 14 patients during the past 18 months, with results better than the 25 percent to 30 percent re-operation rate reported from European trials.

“When I speak to patients I want them to understand that this is not a perfect solution,” Kuhn said. “It does help with pain and it does help give them better function, so it takes people who were in very bad shape and makes them better, but not perfect.

“And because the complication rate is high I really want to be sure patients understand what they are getting into,” he added.

Complications that have been described with this implant include infections, dislocations, loosening and wear. Only one of Kuhn’s patients has required a re-operation.

If the two-hour surgery is successful, the shoulder pain goes away quickly and the shoulder begins to function, but with the deltoid muscles now doing the work of the rotator cuff. **VM**

—CRAIG BOERNER

Residents Rob Wells, M.D., and Brandon Ramo, M.D., work together in a simulation training session.

Vanderbilt emergency medicine resident gains national attention

Third-year Vanderbilt emergency medicine resident Travis Stork, M.D., thought working in the VUMC Emergency Department was hectic. But as the central figure in the winter edition of ABC's "The Bachelor," the 33-year-old's schedule was filled with a dizzying slate of appearances, interviews and photo shoots – not to mention being recognized nearly everywhere he went.

The show, filmed on location in Paris, premiered in January, and in its weekly Monday time slot through the end of February, was seen by more than 6 million people. Stork ended months of speculation on Feb. 27 when he chose hometown favorite Sarah Stone on the show's season finale. He offered a diamond ring on a necklace to the fellow Nashvillian, who edged out Moana for the ED physician's heart.

However, several weeks later Stork and Stone issued a joint statement saying they remain friends but are no longer a couple. Stork completes his residency in July. **VM**

DANA JOHNSON



New center takes hands-on approach to enhancing care

Vanderbilt University Medical Center is creating a new center to enhance the training of medical and nursing students, residents, faculty and staff so that patient care is optimized.

The Center for Experiential Learning and Assessment (CELA) is set to open in early 2007 and will be located in Medical Research Building IV above Langford Auditorium.

It will be home to both a new standardized patient program and a technical-based Center for Medical Simulation.

Heading the endeavor are Bonnie Miller, M.D., associate dean for Undergraduate Medical Education, John Shatzer Jr., Ph.D., associate professor of Medical Education and Administration and director of the Office for Teaching and Learning in Medicine, and Matthew B. Weinger, M.D., professor of Anesthesiology, Biomedical Informatics and Medical Education and director of the Vanderbilt Center for Medical Simulation and the Vanderbilt Center for Perioperative Research in Quality.

Shatzer, in addition to helping lead the school's efforts to improve medical education by providing new tools and strategies to enhance learning, define and measure outcomes and meet the demands of educational accrediting bodies, will oversee the human simulations, or the use of standardized patients for teaching and assessment.

Weinger, Norman Ty Smith Professor of Patient Safety and Medical Simulation, one of the nation's first endowed chairs focused on patient safety and simulation, will focus on the technical training components of the center – the human mannequin simulators, partial task trainers and virtual reality tools.

On the technical end, the Center for Medical Simulation offers screen-based simulation – computer-like video games for testing knowledge in such skills as Advanced Cardiac Life Support, partial task trainers and virtual reality simulators. The center also has four adult and two pediatric physical simulators, or mannequins.

The Center for Medical Simulation, now located in temporary space at Oxford House, will occupy 4,500 square feet of the new space, including a 1,100-square-foot simulation room, which can be divided into two separate simulation rooms, each with its own control room and areas for pharmacy/supply and debriefing.

The new 6,500-square-foot standardized patient facility will have 12 exam rooms equipped with cameras and microphones for monitoring trainees' interactions with the standardized patients. **VM**

–NANCY HUMPHREY



COURTESY ABC TELEVISION



Perennial herb may improve life for breast cancer patients

BY MELISSA MARINO

Ginseng, one of the most widely used herbs in traditional Chinese medicine, may improve survival and quality of life after a diagnosis of breast cancer, according to a recent study by Vanderbilt-Ingram Cancer Center researchers.

The large epidemiological study, led by Xiao-Ou Shu, M.D., Ph.D., and supported by grants from the National Cancer Institute, was published online in the *American Journal of Epidemiology*.

Ginseng is a slow-growing perennial herb whose roots have been used in traditional Chinese medicine for more than 2,000 years. The two main classes of ginseng – red and white – have different biological effects, according to traditional Chinese medicine theory. White, or unprocessed, ginseng is used over long periods to promote general health, vitality and longevity. Red, or processed, ginseng provides a much stronger

effect and is used for short periods to aid in disease recovery.

Both varieties contain more than 30 chemicals, called ginsenosides, which have anti-tumor effects in cell culture and animal studies, suggesting that the herbs may provide specific benefits to cancer patients.

In fact, ginseng use has been increasing among cancer patients in recent years, particularly in women diagnosed with breast cancer. But scientific analysis of ginseng's health benefits in patient populations has been lacking.

"There is a lot of skepticism about herbal medicine," said Shu. "That is why we are taking the observational approach at this time to see whether there is any efficacy. If so, we can go to the next phase. ... and eventually go to clinical trials."

Shu and colleagues assessed the effects of ginseng use in breast cancer survivors as part of a large epidemiological study, the Shanghai Breast Cancer Study, which has followed 1,455 breast cancer patients in Shanghai since 1996.

For the current study, Shu and colleagues evaluated breast cancer patients for ginseng use both before and after their diagnosis of breast cancer. All patients who used ginseng had received at least one type of conventional cancer therapy (e.g., surgery, chemotherapy and/or radiotherapy).

Information on ginseng use prior to cancer diagnosis, which was available for every subject, was used to determine whether prior ginseng use predicted survival.

At follow up – about three to four years after diagnosis –

the researchers asked about ginseng use since diagnosis. That information, which was available only for survivors, was used to look at quality of life measurements – i.e., physical, psychological, social and material well-being.

Before diagnosis, about a quarter of patients (27.4 percent) reported using ginseng regularly. After diagnosis, that percentage jumped to 62.8 percent, the researchers found.

They also found significant improvements in both survival and quality of life measures in patients who used ginseng prior to diagnosis.

The findings suggest that ginseng may provide tangible benefits to breast cancer survivors, but there are limitations to the study. The varieties and the methods of ginseng use and the use of other complementary and alternative therapies could not be fully accounted for in the analysis. Also, the quality of life measures exclusively relied on patient self-reporting.

Although side effects of ginseng use were not recorded in this study, Shu warned that the seemingly innocuous root can create problems when improperly used and should be taken with caution.

Shu hopes to confirm and expand the current findings through continued collection of data in this patient population, from another ongoing study of 4,000 breast cancer patients, and eventually, in randomized clinical trials. **VM**

Treating the WHOLE person

Tragedy inspired Anderson Spickard Jr., M.D., to bring new concept in addiction treatment to Vanderbilt

ANDY SPICKARD IS THE IMAGE of the old-time, small-town, compassionate, house call-making physician – silver hair, friendly smile, and a southern drawl that makes you want to sit on a front porch with him somewhere, sipping a tall, sweating glass of iced tea. And he truly is a compassionate, Southern physician, but to label him as just that would be ignoring the past 20 defining years of his career – a physician practice that has centered around the treatment of addiction, especially in the physician population, and incorporating the treatment of addiction into Vanderbilt’s medical school curriculum and resident education.

Spickard, professor of Medicine and Psychiatry, Chancellor’s Professor of Medicine, and medical director of the Center for Professional Health, started his career at Vanderbilt in 1963 when he joined the internal medicine practice in Vanderbilt’s Medical Arts Building with F. Tremaine (Josh) Billings, M.D. After five years he left that practice to help establish The Vanderbilt Clinic and to organize the Vanderbilt Professional Practice Plan.

During his career at Vanderbilt, Spickard, MD’57, HS’57-’58, ’62, served as medical director of the Vanderbilt Occupational Health Service from 1975 to 1989 and began and directed the Division of General Internal Medicine from 1976 until 1993.

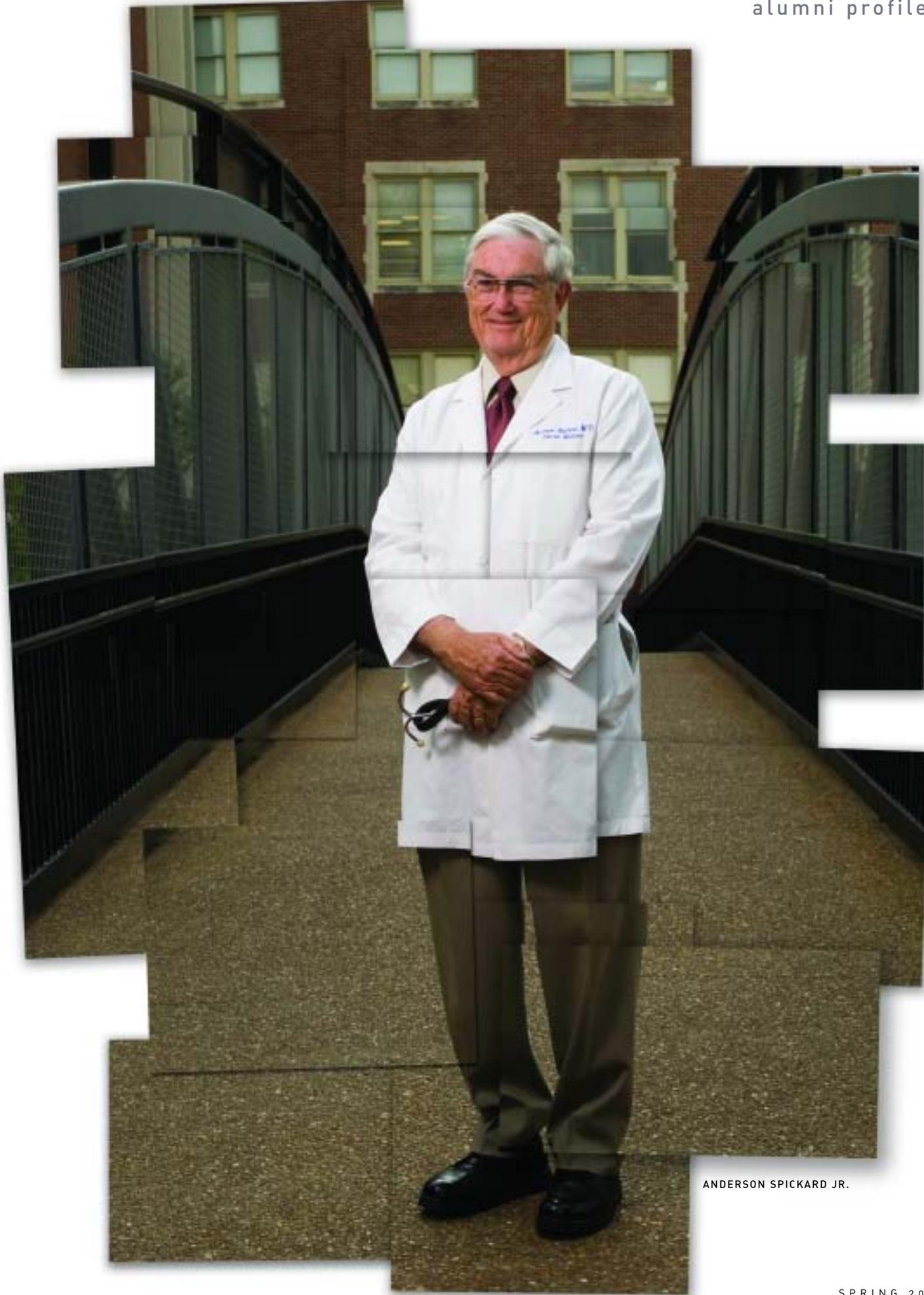
But in the early 1980s a traumatic experience changed his career path and led to the development of the Vanderbilt Institute for the Treatment of Alcoholism (VITA), the inpatient and intensive outpatient treatment program for persons with substance dependence.

A Vanderbilt physician, who was an alcoholic, was referred to Spickard’s internal medicine practice. The physician lied to Spickard, saying he was attending Alcoholics Anonymous meetings, and Spickard cared for the man the only way he knew how – medically. While still under Spickard’s care, the physician took his own life.

“I was well trained in the physical effects of alcoholism, but did not know about the emotional or spiritual parts. I did not know then, what I learned subsequently, that you had to take care of the whole patient,” he said. “We knew that alcoholism destroyed the body and the brain, the heart, the peripheral nerves, the liver. We knew that thiamine was leached out of the body by alcohol. We knew how to treat the alcoholic in the emergency room. The medical understanding was well characterized, and the AA people outlined the behavior and particularly the spiritual consequences, but there was a disconnect between that and academia, and I wanted to put those two together.”

Spickard asked that he be sent to learn the “whole person” concept of the treatment of alcoholism – treating the physical, emotional and spiritual aspects of the

WRITTEN BY **NANCY HUMPHREY**
PHOTOGRAPHY BY **DEAN DIXON**



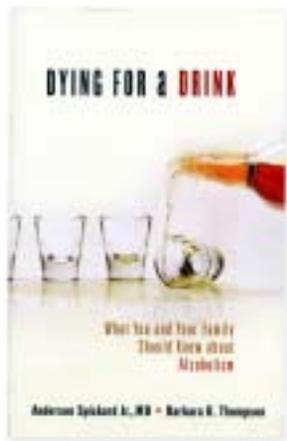
ANDERSON SPICKARD JR.



DANA JOHNSON

Anderson Spickard Jr., M.D., visits with longtime patients from his internal medicine practice, from left, Ann Rose Richards, her mother, Sue Baird, and her husband, Joe.

His immersion into the field led to his co-authoring a book, “Dying for a Drink. . .” The book is now in its second printing and is translated into seven languages and Braille.



disease. “Alcoholism was not well-characterized in the medical literature and wasn’t accepted as a disease,” he said. “It was thought to be a bad habit and church people thought it was a sin. All of that was confusing to everybody.”

So Spickard, with the blessings of the hospital administration, went to St. Mary’s Rehabilitation Center in Minneapolis – one of the best places in the country for the whole person treatment of alcoholism – and learned the comprehensive approach.

After that incident, Spickard and colleague Billings, wrote a “Sounding Board” column for the *New England Journal of Medicine* about alcoholism in a medical school faculty, and with a check from hospital administration for \$100,000, opened VITA and Vanderbilt’s first 30-day recovery program on the renovated top floor of the Student Health Service. He would remain the institute’s medical director for 12 years. “I was doing all the histories and physicals and discharge summaries in addition to my own practice, but I was determined to do it and teach an elective course for medical, nursing and divinity students and residents at the same time. It was a passion.”

His immersion into the field led to his co-authoring a book, “Dying for a Drink,” in 1985 with North Carolina

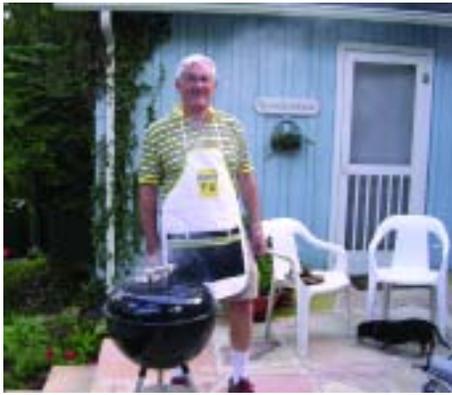
freelance writer, Barbara Thompson. The book is now in its second printing and is translated into seven languages and Braille.

Peter Martin, M.D., professor of Psychiatry and director of the Division of Addiction Psychiatry, first met Spickard when Martin was being recruited by the Department of Psychiatry in 1986. “I was very excited about the fact that someone in another department other than Psychiatry was so interested in addiction. We really hit it off. I really liked him, and he was instrumental in my coming here.”

When Martin joined the faculty, he and Spickard reached a “gentleman’s agreement” to run VITA together, because the two realized that addiction is a complicated area that requires both psychiatric and medical knowledge. In a trailblazing way of treating addiction patients, the two would see patients on rounds each morning and collaborate on their care. Martin quickly learned that Spickard had a unique way of dealing with patients facing addiction – he would often confront them in a stern, challenging, but kind way. He might call patients “hard-headed” or warn, “you’re going to be six feet under in a pine box.”

“I would teach him psychiatry and he would teach me medicine,” Martin said. “It was a very collegial and friendly and happy time in our lives. And I think he would say the same, that it was a very stimulating part of our careers,” Martin said. “I was a young doctor at that point, and had spent most of my time doing research. I learned a lot from him – mostly how to be a good doc. I picked up a lot of his excellent bedside manner skills. He was sort of your family doctor. He would go to the funerals of patients and would make house calls. He is the kind of doctor you would trust to be a doctor to the people who are dearest to you, one whose opinion you listen to. And I think he would say that he learned from me about the complexities of human behavior and psychiatry from discussing the same patients together during rounds.”

Martin said that not only was Spickard his introduction to Vanderbilt, but to Nashville and the South as well.



"I'm a Canadian. I didn't have a clue. But he taught me so much about how to be effective at Vanderbilt, and how to relate to a different culture. Andy exemplifies the positive of all those negative biases that people from the North often come to the South with. From Andy, I learned how smart Southerners are, how sweet they are, how much integrity they have, and what good friends they are."

From 1989 to 1996 Spickard was the national program director of a \$50 million grant program, "Fighting Back: Community Initiatives to Reduce Demand for Illegal Drugs and Alcohol," funded by the Robert Wood Johnson Foundation. Through the program, 14 cities received grants to organize their communities to fight against alcohol and drug abuse.

Being a doctor wasn't always in the cards for Spickard. His father, Anderson, a World War II veteran, successful businessman and, at the time, the only member of his family with a college education, was struck and killed by a bolt of lightning on May 28, 1950 – a bolt so powerful that it knocked three others standing with him to the ground. The event so deeply shook Spickard that it led him firmly to a career where he could help others, said Sue, his wife of 46 years.

Three weeks into his junior year at Vanderbilt, on a walk across campus, the thought raced through his mind, "I've got to be a doctor." Spickard would attend Vanderbilt Medical School and spend almost his entire career at Vanderbilt.

"My grandfather had instilled in me an innate curiosity to know the truth, the facts. I really wanted to know," he said. "I read some books, 'Great Adventures in Medicine' by Samuel Rappaport and 'Eleven Blue Men and other Narratives of Medical Detection,' studies of diagnosing obscure diseases, and I was ready to go."



After making up some classes he had failed to take, because he wasn't sure he was going to medical school, Spickard graduated from Vanderbilt, and was accepted into its medical school. "It wasn't a high-powered thing back in those days. Dr. Sam Clark was the dean. I took the exam and he said 'come on,' and that was the end of it."

Spickard said his first year of medical school was difficult. He had trouble with the absolutes of medicine – how the femoral nerve snakes under muscle, the number of holes in the skull, etc. – and during his second year, struggled with bacteriology. But when he walked into his second-year pathology course, he "knew it was worth it." In those days, there was no lecture and no computerized photographs or illustrations; students were just given a copy of Gray's Anatomy and a pick (for finding nerves).

After graduating from medical school in 1957, Spickard served two years of his internal medicine residency at Vanderbilt, a year at Johns Hopkins and two years at the National Institutes of Health, then came back to Vanderbilt in 1962 as the first Hugh Morgan chief resident of Medicine under David Rogers, M.D. He married Sue in 1959, and they have three children. Susan, a graduate of the Vanderbilt University School of Nursing, with a master's degree in cardiac care from the University of Virginia, is a nurse and lives in North Carolina with her husband and four children. Anderson III, an assistant professor of Medicine at VUMC and one of Vanderbilt University School of Medicine's Master Teachers, is married and has three children. David is also mar-

Left: Anderson Spickard Jr. with his dog, Sam, at his vacation home on Monteagle Mountain. Above: The Spickards – Anderson III and Anderson Jr. – are both colleagues and friends.

ried with four children. He works for a Christian agency in Raleigh, N.C., that helps unite those who are jobless with businesses interested in hiring.

Last year, Spickard wrote the most difficult letter of his career – telling his 140 remaining patients (their average age is 70) that he would be retiring from his internal medicine practice to concentrate on the Physician's Wellness program, teaching and writing.

"One of my first patients was referred to me for an insurance physical," Spickard said. "I found a thyroid cancer on him. He's well today. That's the kind of case that's hard to stop. We've been through so much together."

Spickard said although his career has been full, he would most like to be remembered for how he has taught medical students, residents and others to treat addiction. He has even traveled to Moscow to introduce the Russians to a 12-step Protestant-based treatment program known as OPORA. Today more than 4,000 people in 40 communities in Russia have trained to become OPORA counselors.

"You can't believe how satisfying it is to have focused a large part of my career on this. I feel like I've helped a lot of people. This will stand as the most definitive thing I've done." **VM**





hooked

ADDICTIONS CARRY HUGE PERSONAL, SOCIETAL LOSS

ADDICTIONS ARE A PLAGUE on the health and well-being of individuals, families and American society, draining billions from the economy every year.

What if the cost of health care in America could be contained by helping people address and perhaps even control, or overcome, addictions? The idea may sound too simplistic to even consider. However, addictions directly contribute to the majority of the conditions that bring people into the doctor's office and through the hospital doors. These include heart disease, stroke, cancer, diabetes, traffic accidents and burns.

And what if, by aggressively treating addictions, we were able to make the world a much better place? Maybe it's not just wishful thinking. Addictions play a significant role in many of society's ills: domestic violence, child abuse, suicide, loss of productivity, murder, rape and robbery.

Research on the impact of addictions consistently points to the high health care and societal costs of both chemical and behavioral cravings gone out of control. A 2004 study put the annual cost of alcohol, drug and tobacco use in the United States well above \$500 billion. This figure includes health care and law enforcement expenditures, lost productivity and other societal costs. It does not, however, include problems associated with overeating or out-of-control gambling, computer use, or sexual acting out, which are more difficult to measure.

Nevertheless, reimbursement for treatment of addictions usually is last on the list for both private and government insurers. And the reason may be that, when it comes to the illness of addiction, we really still believe that patients have the power to cure themselves.

WRITTEN BY **ELIZABETH OLDER**
ILLUSTRATION BY **MICHAEL WOLOSCHINOW**

What were once vices

“I think society doesn’t accept addiction as an illness,” explains Peter Martin, M.D., professor of Psychiatry and Pharmacology who heads the Vanderbilt Addiction Center and the Division of Addiction Medicine. “People look at it as a bad habit, something that, if you shaped up, you could fix.” But as addictions progress, they very often carry with them huge personal losses, of friends and family, financial security, healthy body organs.

“Addiction goes beyond the person who is groveling on the sidewalk or sleeping under the bridge,” Martin maintains. “Addiction affects the elderly woman sitting next to us in church, the co-worker we lunch with at work, the young man dating our daughter, or the daughter herself,” he says.

“Why would people continue to want to hurt themselves?” Martin asks. “That’s what makes it an illness, in my opinion.”

Medical professionals still disagree about whether chemical substances and damaging behaviors should be lumped together under the addiction label, whether they are more alike than different. The changes in the body and the brain that are brought on by addictions to alcohol, drugs and nicotine have been well documented medically, but behavioral compulsions – for gambling, sex and food, for example – may be just at the edge of scientific understanding.

Hard statistics for the incidence of behavioral disorders are difficult to pin down, but published estimates have suggested that from 1 percent to 3 percent of the population is addicted to gambling, 3 percent to 8 percent to sexual activities of various forms, and 5 percent to 10 percent to the Internet, with the majority of that usage related to cybersex or pornography and gambling.

The current epidemic of obesity and associated Type 2 diabetes in the devel-

oped world, seems to be fueled by out-of-control overeating quite akin to food addiction. There has been a 50 percent increase in Type 2 diabetes per decade in the developed world, Martin said.

“There are compulsive behaviors that just intuitively appear to have a lot of parallels to addictions,” says Paul Ragan, M.D., associate professor of Psychiatry and medical director of the Faculty and Physician Wellness Program. “People have noticed these appear to be addictive behaviors. I think gambling and sex are the two that seem to lend themselves to the addictive paradigm.” But he adds that “purists” in the field would assert that addictions, by definition, must involve a chemical substance. And some experts say labeling these behaviors as addictions simply serves to get people off the hook by eliminating personal responsibility.

“Several years ago I would not even have considered these other behaviors as

When being a quitter isn’t a bad thing

Before someone can quit smoking one thing has to occur – the desire to do so.

“People have to want to quit. We can provide the resources to help them.” That’s a promise from Barbara Forbes, director of the tobacco cessation program at the Kim Dayani Health Promotion Center at Vanderbilt.

Since the beginning of the year, the kick-tobacco classes and an initial month of medication have been offered free to Vanderbilt faculty, staff and their covered dependents. They receive a \$300 reimbursement through their health care plans upon completion of the eight weekly sessions.

“I think Vanderbilt has taken a real big leap in the interest of its employees,” says Forbes, a nurse practitioner who smoked for about 20 years. “We’re a health care facility. Smoking is the No. 1 preventable cause of premature death in the United States.”

Forbes says incentive programs to quit make good business sense for any corporation, since smoking contributes to higher costs due to lost productivity, maintenance and house-keeping, health care premiums and workers’ compensation. The Dayani Center also takes the program to off-site businesses. Statistics show that about 80 percent of smokers will quit after completing a good program, and of those about 40 percent will not go back, Forbes says.

But addiction to nicotine, which curbs appetite, relieves stress and relaxes the muscles through its interaction with

brain chemicals, is not easy to beat.

That’s why pediatrician Bill Wadlington, M.D., who has been involved in educating local medical residents for many of his 79 years, thinks doctors-in-training need to be better educated to help their patients in that effort. Wadlington, a member of the VUSM class of 1952, has tried to do a little of that himself, giving lectures to medical students at the children’s Adventure Science Center. Wadlington has been a key supporter of the center’s health exhibit, which explains the detrimental physical effects of smoking.

Peter Martin, M.D., professor of Psychiatry and Pharmacology and director of the Vanderbilt Addiction Center and the Division of Addiction Medicine, says many smokers also need psychiatric support because so many are also depressed. Smokers often do better at stopping if their depression is treated, he said.

Forbes feels the free month of medication – available in various forms, including skin patches, gum, lozenges, nasal spray and pills – helps ensure the best start for those trying to quit. Since the \$300 program payback is meant as encouragement, participants don’t have to succeed at quitting as long as they attend all sessions. One thing that always impresses participants is having their carbon monoxide levels measured, Forbes says.

“It shows you have a level of poison in your bloodstream,” she explains. “It’s a real wake-up call.”

– ELIZABETH OLDER

being addictions,” explains Martin. “There was a time when people would not really have considered anything other than a drug (a chemical substance of some kind) as addictive.”

However, advances in brain imaging technology have challenged that perception by showing that behavior addicts share similar patterns of brain activation that prompt drug and alcohol users – and, it appears, even gamblers and sex addicts – to use increasingly larger quantities of their addictive substance or activity in question to achieve the same “high.” Martin says that scientists have described this as a “hijacking of the brain,” when the so-called pleasure circuits require more and more of the feel-good neurotransmitter dopamine. This malfunction typically involves what are considered fundamental human drives, such as reproduction, exploration, “fight or flight” and eating, he explains.

Martin says understanding this out-of-control brain might be the last medical frontier, but he believes we already know enough to stop blaming people for not being able to stop really bad habits.

“A person who is addicted isn’t enjoying alcohol, drugs or their dysfunctional behaviors anymore,” says Martin. “Their lives actually lack the day-to-day pleasures that we all live for. They no longer enjoy a beautiful flower, the smile of a loved one, or seeing their children grow to adulthood. Isn’t that sad? Why can’t we, as a society, understand they are suffering rather than blame them for their illness?”

We walk the line

So when do the evening cocktails, the after-dinner cigarettes, or the porn sites on the Internet become true addictions?

“The basic idea is you take something that is pleasurable and you increase the frequency and the dosage. It’s not fun anymore,” says Ragan. One hallmark of addictive behavior, Ragan explains, is that it begins to interfere with the everyday functions of life: job productivity, family relationships, schoolwork, financial solvency. And even though study after study has documented the costs – both in



JEFFREY GUY, M.D.

Burned by addiction

Fire and smoke bring patients into Vanderbilt’s Regional Burn Center, but, in many cases, there’s something even more sinister lurking behind – addictions to drugs, alcohol and cigarettes.

“Most patients aren’t interested in telling you, ‘I blew myself up,’” explains Jeffrey Guy, M.D., director of the center. People burned making methamphetamine accounted for up to one-third of the center’s patients before a Tennessee law made the over-the-counter medicines used to make the drug more difficult to buy. Admissions due to meth now are fluctuating around 10 percent, but seem to be rising again, Guy says.

Guy worries the law may be like “putting a Band-Aid on a gunshot wound,” driving out the so-called “Ma-and-Pa” producers, but having less effect on more serious meth-makers who probably will find another way to get ephedrine and pseudoephedrine.

Tennessee has been near the top of the list for meth lab seizures. The drug has crossed socioeconomic levels, age groups and geographic areas. The worst cases admitted to Vanderbilt usually involve lab explosions, which often burn patients over 40 percent to 80 percent of their bodies, Guy says. The cost for caring for these severely injured patients can climb to \$500,000 and far beyond, and most have no insurance to help pay, he says. Inhalation of the chemical fumes causes additional severe injuries.

“It’s just so poisonous,” says Guy, an associate professor of Surgery in Trauma & Surgical Critical Care.

With a reduction in TennCare dollars for physical rehabilitation and home health services, hospital stays are getting longer for severely injured patients, some who may be permanently disabled and never return to productive society, he says.

For other burn patients, alcohol and cigarettes are the inflammatory combination. A patient will become intoxicated and fall asleep while smoking a cigarette, causing a fire. Research indicates around 50 percent of the people who die in fires are intoxicated, and alcoholics are 10 times more likely to be fire or burn victims.

Burn patients also may have mental illnesses, either caused or exacerbated by their addictions. Although a burn victim’s injuries are obvious, Guy questions whether they are the root cause of the problem.

“Am I treating the symptom or the cancer?” he asks. “I think the people in mental health are treating the cancer.”

Guy worries about how to balance uncompensated care with keeping the burn center viable to serve all its clientele, who come from an eight-state region, with most from bordering states and across Tennessee. Burn units typically are run in public facilities, rather than private hospitals, he explains.

“It would be a very reasonable consideration to anticipate government reimbursement for the uncompensated services we provide to the community at large,” Guy said. “Vanderbilt has always done the right thing. It’s who we are,” says Guy, referring to the hospital’s continuing commitment to serving burn and trauma victims.

“These are not disposable people,” he says. VM

- ELIZABETH OLDER

The Children of Addiction

Addiction casts a very wide net. When it comes to children, it can catch them before they are born and entangle them for the rest of their lives.

It begins with a woman drinking during pregnancy. Fetal Alcohol Syndrome is the leading known cause of mental retardation in Western society. The condition causes growth retardation, facial abnormalities, central nervous system problems and learning and behavioral disorders.

If one or both parents are alcoholics or drug addicts, children are much more likely to be neglected or experience physical, sexual or emotional abuse.

"The risk factors are well identified," says Christopher Greeley, M.D., assistant professor of Pediatrics and medical director of the Newborn Nursery and the Child Maltreatment Program. Studies show that between one-third and two-thirds of child maltreatment cases involve some type of substance abuse.

"The biggest problem is alcohol, when we look at the pure number of kids who are affected by a substance," says Greeley. The problem grows exponentially when alcohol use reduces the control of parents who themselves experienced an abusive upbringing, he explains.

"That's just a recipe for disaster," he says.

Research indicates that more than 9 million children are in

homes with a parent who is dependent on alcohol or illicit drugs. Abused and maltreated children of substance abusing parents have poorer outcomes in all areas of their lives – physical, mental, social and emotional. They are at greater risk for developing substance abuse problems. And the violence that is associated with these dysfunctional households is thought to increase their likelihood of being victims of and committing violence themselves.

"Abuse begets abuse, if you're not given a good role model to be a parent," says Greeley.

But these children who missed the luck of the family draw do sometimes break the cycle. Greeley points to success with home-visitation programs where nurses and social workers get closely involved with families, providing that all-important healthy role model that so often is missing. And neighborhood programs hold the promise of helping entire communities make headway, he says, bringing together social services, health care, education, law enforcement and community leaders to combat the problem.

"You have to have a multidisciplinary approach," he explains.

The goal is to help these children learn to live a different kind of life.

"You have to help them become normal adults," he says.

- ELIZABETH OLDER

health care dollars and societal well-being – many medical plans still pay little or nothing for treatment, he says.

"We offer the least treatment for addictions, which have an enormous impact on our country. The cost is enormous, and we invest very little," he says. To illustrate that point, Ragan suggests that if nicotine addiction would somehow magically disappear, "One health care crisis would be solved overnight."

Statistics seem to support this wistful point. The Centers for Disease Control cite tobacco use as the leading cause of preventable mortality in the United States, contributing to about one out of five deaths every year. An addiction shared by some 70 million Americans – almost 30 percent of people aged 12 and older – the use of tobacco is a direct factor in the development of cancers, heart disease and chronic lung diseases. It harms nearly every body organ and reduces life expectancy by an average of 13 to 14 years.

The chemical dependencies of alcohol and drugs cause premature death, disability, chronic illness, workplace accidents, and traffic injuries and fatalities. And these addictions hit home, correlating to an increased incidence of domestic violence, child abuse and suicide. The 2004 National Survey on Drug Use and Health found 19.1 million Americans 12 and older, or 7.9 percent of the population, were illicit drug users. Of these, 6 million used prescription-type stimulants, sedatives and other drugs for nonmedical purposes. And 16.7 million Americans – 6.9 percent – were heavy drinkers.

Ragan feels medical research is making progress in understanding and treating addictions, but he's less optimistic about advances in societal attitudes. While insurance providers spend millions to repair the damage caused by substance abuse – liver transplants are one example – Ragan says, "No one wants to pay for addiction treatment." Research shows that chemically dependent individuals cite

cost and the lack of insurance as the top reasons for not receiving treatment.

"As a society as a whole, we don't get it," Ragan says. "We're missing the boat."

Oh, the tangled web

If we seem confused by the very nature of addiction, perhaps it's because it is not a simple subject. One complicating factor is that addicted people often also have a psychiatric condition, or more than one addiction at the same time. These co-occurring conditions can complicate both diagnosis and treatment.

"Addictions can be, under certain circumstances, the consequence of another mental illness, and under other circumstances, they can cause a mental illness," explains Martin. "It's a question of what comes first, the chicken or the egg."

Since any number of psychiatric disorders and addictions can occur together, the physician must become somewhat of a medical detective.

"The question becomes, what is the

Peter Martin, M.D., discusses a patient's chart with colleagues.



role of that illness in addiction and vice versa,” Martin explains. Quite often, co-occurring disorders will be treated simultaneously – for example, depression and alcoholism – although it may be difficult to untangle their cause-and-effect relationship. And since mental illnesses often are stigmatized in much the same way addictions are in American society, treatment for these diseases also is thwarted by lack of financial support. Psychiatric health plan benefits often are “a big step down” from benefits for other medical conditions, Ragan points out, even though they usually do go further than benefits for treatment of substance abuse.

“We know what the treatment is,” says Ragan. “Is it the will of the insurance companies, the medical professionals, the people who are not addicted, to do what needs to be done?”

Healing wounds, overcoming obsessions

“I think there is good evidence that treatment works,” Martin says. “A lot of people get better. I would say that it’s very hopeful. It’s certainly as hopeful as for the treatment of the vast majority of other illnesses for which society gladly pays the cost of the treatment.”

One study showed a \$7 return in monetary benefits to society for every dollar spent treating substance abuse. A number of other analyses of treatment programs have documented significant savings in such areas as lost work days, hospitalizations, psychiatric services and emergency room visits as the result of treating people’s substance addictions.

Even with these positive results to point to, Martin thinks it’s unfair to expect that addictions must be completely cured – that the treatment has to “work” perfectly in everyone for it to be considered successful. An addiction should be viewed as an illness – just like high blood pressure, diabetes or heart disease, he says – that very likely will require monitoring and treatment at different times throughout a patient’s lifetime.

The arsenal for treating addictions is expanding with the development of drugs

that seem to help control cravings for chemical substances and, it appears, even addictive behaviors, such as eating disorders and gambling. Other medications have significantly reduced withdrawal symptoms for drug users.

“The pharmacology of addiction treatment is an active and vibrant area,” Ragan says.

“We do believe there is a very powerful genetic component,” he says, noting that a genetic link is suspected in 30 percent to 50 percent of cases of alcohol abuse. “There is no question it runs in families,” he says, but he adds that it can be affected by environment – what is learned from parents and others – as well as biology. In treatment, many adults who grew up with substance abusers must be taught healthy ways to handle life challenges, and, almost literally, a new way to live in the world, Ragan explains.

Martin says researchers will need to work toward understanding how genetic and environmental factors interact to influence addictions, and the connections between psychiatric illnesses and these disorders. Other research might focus on how medication and psychosocial therapies work together in treatment, he says.

But Martin believes we need to take a broader view of addictive behavior, pointing to obesity and other medical conditions that are brought on or exacerbated by what patients seem to choose to do or not do, such as eating a healthy diet and exercising.

“**I think there is good evidence that treatment works. A lot of people get better. I would say that it’s very hopeful.**”

“When we see people with a heart attack, do we say that they brought that on themselves?” he asks. “There are few illnesses that don’t have a component of out-of-control behavior.”

Even what is highly valued in society – like hard work – can take on addictive qualities, Ragan explains.

“If the person is doing it to the exclusion of other things and it’s interfering with other activities then, no, it’s not good,” he says. He counsels these so-called workaholics that even Mother Teresa spent several hours alone each day in prayer and meditation.

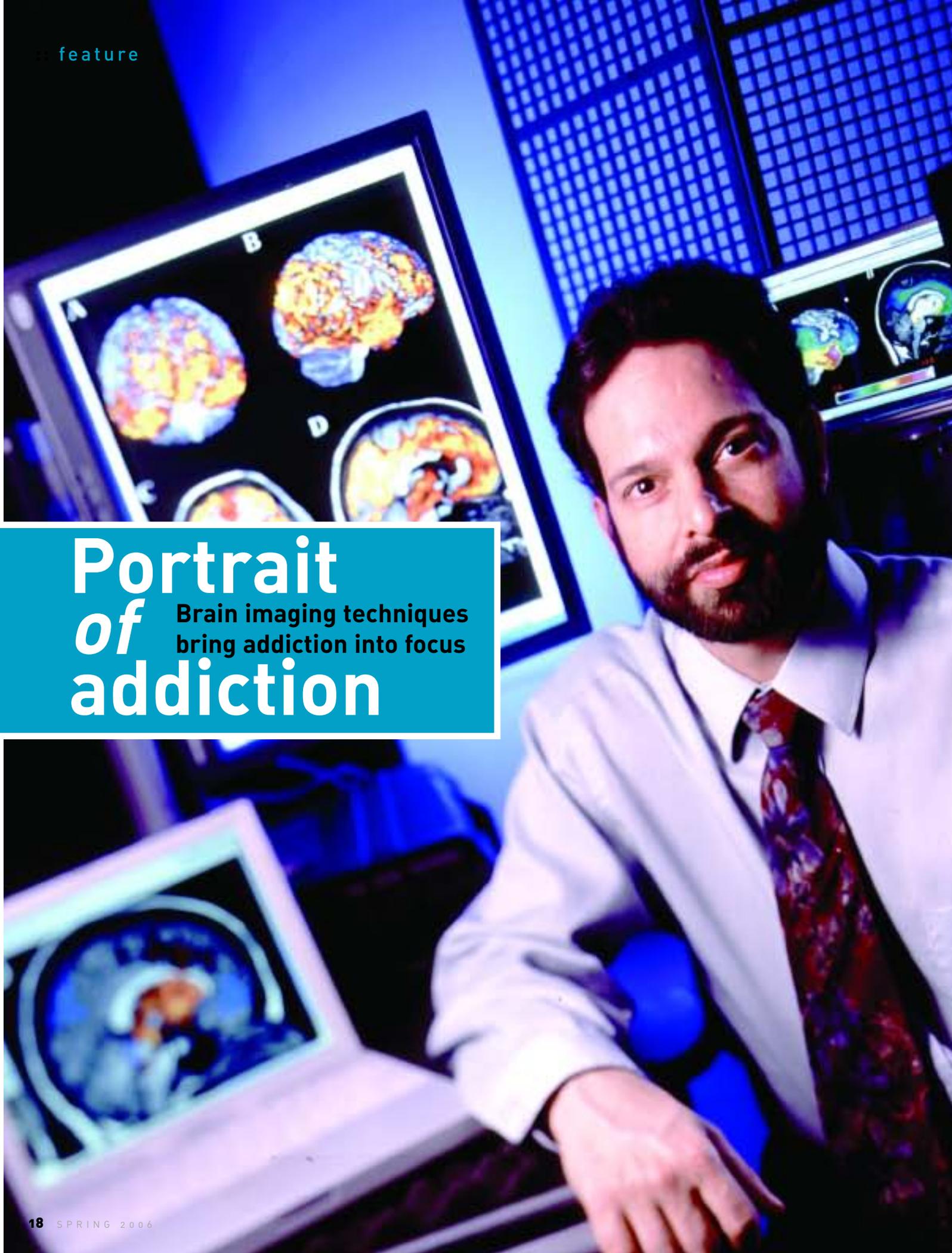
“Before she ministered to other people, she ministered to herself,” he says.

“What you have to determine, in essence, is what is involved in a balanced life?” says Martin. “If any behavior supersedes this balanced life, then it’s a candidate for being considered an addiction.”

A balanced life: a simple prescription, but one that may remain elusive for many people until science unravels the mystery of why we don’t just quit doing things that we know aren’t good for us.

If – or when – research finally does find the answer for those stereotyped addicts marginalized on the edges of society, Martin thinks the rest of us may be surprised to find that knowledge goes far beyond what we originally expected.

“We may learn more about ourselves than we ever wanted to know,” he says. **VM**



Portrait *of* addiction

Brain imaging techniques
bring addiction into focus



a **TASTY** chocolate treat
 a **\$100 miLLiON** jackpot
 a **bEAuTifUl** symphony
 a line of **COcAiNE**
 a **SYRiNGe** of heroin
 a **SYRiNGe** of heroin

THESE STIMULI, THOUGH outwardly different, spark a similar conversation inside our cranium. The chemical banter between our brain's pleasure centers aims to reward the actions that brought pleasure and ensure that we repeat those behaviors.

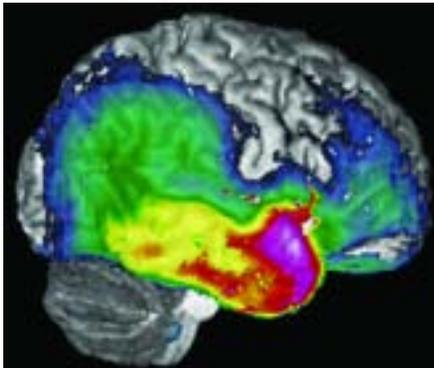
This ancient and elaborate system has served us well – encouraging us to seek out and consume nourishing food, to reproduce, and to work diligently for our paychecks so that we can continue eating and reproducing.

Unfortunately, drugs of abuse have hijacked this system in many people. Despite the varied chemical make-up of these drugs, they all stoke our reward system in the same way.

“These systems did not develop for the purposes of cocaine (or any other drug),” says David Zald, Ph.D., assistant professor of Psychology at Vanderbilt University and an investigator with the Vanderbilt Kennedy Center for Research on Human Development. “These drugs directly act on the system for natural rewards, manipulating the system that was already in place.”

Understanding addiction requires understanding how the brain's reward system works. As this complex circuit is being worked out by scientists, brain imaging

WRITTEN BY **MELISSA MARINO**
 PHOTOGRAPHY BY **DEAN DIXON**



Levels of D2 dopamine receptors overlaid on a lateral view of the human brain.

techniques, such as functional magnetic resonance imaging (fMRI) and positron emission tomography (PET), are allowing researchers to visualize the neural chatter that underlies reward and addiction.

Anticipation

The brain regions central to addiction “talk” to each other through the exchange of chemical messages, particularly those carried by the neurotransmitter dopamine. These messages can be tracked using PET imaging, which provides a view of brain activity at the molecular level. Molecules of interest, such as neurotransmitters, are tagged with a radioactive marker and injected into the body. A PET scan then reveals the molecules’ locations within the brain in brilliant, three-dimensional detail.

Using radiolabeled molecules similar to dopamine, researchers can see the brain regions involved in reward.

With PET, Zald and others are exploring how certain situations and drugs of abuse cause dopamine release and how dopamine release corresponds to the pleasurable feelings a person reports.

All pleasurable stimuli – food, sex, drugs, etc. – cause the ventral tegmental area, located deep within the primitive midbrain, to produce and release

dopamine into the nucleus accumbens, another part of the brain’s pleasure pathway near the front of the brain.

“In the early years, we thought of dopamine as the reward itself because we knew that it was essential,” says Zald. “The story has gotten more complicated in recent years.”

In addition to acting as a general motivating factor (i.e., influencing how much a person or animal will work to obtain a reward), scientists now realize that dopamine has important roles in learning about and anticipating reward.

In a 2004 study, Zald and colleagues examined what actually provokes dopamine release during a rewarding, and potentially addictive, situation. In the study, subjects were given a gambling task under two conditions – one in which subjects could predict the monetary reward beforehand, and the other where the reward was unexpected.

Zald then used PET imaging to see the location and strength of dopamine release in the brain during these situations.

When the reward was fully predictable, there was little observable change in dopamine release compared to a control condition. But when reward was unpredictable, dopamine surged in one particular part of the brain’s reward circuit (the left medial caudate nucleus) while decreasing significantly in others.

“The most striking thing from those studies was that the (dopamine) response appeared to be very tied into whether the reward was predictable or not,” Zald says.

Specifically, the results suggest that gambling, an increasingly common behavioral addiction, alters brain activity in very complex ways. But in general, the findings confirmed in humans the association between dopamine and anticipation of reward that had been observed in animal studies, says Zald. Together, the studies suggest that as a person learns to anticipate a reward, dopamine release becomes a harbinger of the upcoming reward – and possibly a key to relapse.

Different strokes

Currently, Zald and Vanderbilt University Medical Center colleagues Robert Kessler, M.D., and Ronald Cowan, M.D., Ph.D., are using PET imaging to weave together a person’s subjective response to a drug (i.e., how they ‘feel’) with the pattern of dopamine release after receiving amphetamine, a commonly abused stimulant drug.

The factors that underlie a person’s initial response to a drug may be the clue to predicting whether that person is likely to become addicted. These initial responses are highly variable among individuals.

“If you give people low doses of amphetamine, you find that some people get very happy, energized...even euphoric,” says Zald. “But some say they feel nothing. And others actually find it rather unpleasant; they get anxious, irritable, or even dysphoric.”

If scientists could pinpoint the brain changes associated with these varied individual reactions, that information might help show who will become addicted.

Using PET, they hope to find a relationship between amphetamine-induced dopamine release and the person’s subjective response to the drug.

“So far, we’ve found evidence that this is indeed the case. People have very different regulations of their dopamine systems,” Zald says.

Soon, Zald plans to begin assessing genetic factors involved in the dopamine response. Although certain polymorphisms – small changes in the genetic code – are related to a person’s subjective response to drugs, no one has been able to make the connection between genes, subjective response and dopamine release.

“We’re trying to triangulate between the genes, the personality factors, and some physiological factors to see what predicts a person’s response to amphetamine,” Zald says.

To do this, though, the researchers have had to move beyond the classical pleasure pathways of the striatum (which includes the nucleus accumbens) with the help of radiochemicals developed by

The factors that underlie a person's initial response to a drug may be **the clue** to predicting whether that person is likely to become addicted. These initial responses are **highly variable** among individuals.

Kessler, who is the Roentgen Professor of Radiology and Radiological Sciences and associate professor of Psychiatry.

Areas of cortex, the amygdala, the thalamus, and the hippocampus all have important roles in mental illness and drug abuse, says Kessler, but the concentrations of an important dopamine receptor, D2, are too low to be detected with PET.

Kessler has developed new radioactive compounds for PET that researchers are now using to study dopamine action and its involvement in cognition, reward and emotion in brain areas with low concentrations of D2 receptors.

"The areas that have been studied previously have been largely the basal ganglia—areas in the center of the brain that have very high concentrations of D2 receptors," Kessler says. "But it is only part of the story."

By looking outside the traditional pleasure pathways, the researchers believe that individual differences that determine a person's susceptibility to addiction will be revealed.

Coloring addiction

Functional magnetic resonance imaging (fMRI), the newest brain imaging technique, has recently become an invaluable tool for the study of reward and addiction.

As the brain processes incoming information, blood flow increases to the brain regions involved. Functional MRI uses a strong magnetic field and radio waves to detect the magnetic properties of blood.

The colorful areas of 'activity' seen on an fMRI scan represent areas of increased blood flow, allowing researchers to determine the parts of the brain activated when a person is exposed to certain stimuli or while engaged in a task.

This technique can identify brain changes that occur on very brief timescales—catching the more rapid events that PET can miss. Another advantage is that the activity seen with fMRI is not limited to a single neurotransmitter system.

Cowan, an assistant professor of Psychiatry and Radiology and Radiological Sciences, is using fMRI to identify the brain regions that produce the 'high' or euphoric feeling associated with amphetamines.

Related to their ongoing PET research, the fMRI studies aim to determine what brain areas anticipate getting the drug, but in a broader fashion.

"We are trying to see what parts of their brain are engaged as their mood changes over time— as they go from baseline to before their high and then what happens during the euphoric stage and afterwards," says Cowan, also an investigator with the Vanderbilt Kennedy Center.

By imaging the brain changes over time and assessing the participant's mood, Cowan hopes to find ways to block the urge to use.

Functional MRI is also useful for identifying those brain regions outside the classical pleasure pathways that are involved in aspects of drug addiction and reward.

Zald is currently using fMRI to understand how 'higher' brain regions like the orbitofrontal cortex might influence how rewarding a stimulus is perceived by an individual.

"We have studies going on where we present people with menus or pictures of food. We're asking them to decide which food they'd like to choose," Zald says. "We do that also with more social rewards— would you rather go to the movie with person A or get drunk with person B?"

With fMRI, Zald hopes to see how the brain assigns a relative value to different rewards, which could help tease apart the brain processes involved in making decisions about drug use and why the reward from a drug is so much more valued by the addict than that of the natural rewards like food and sex.

Though there remains much to be learned about the amazingly complex biology of addiction, the vibrant colors of fMRI and PET images are providing the palette from which researchers are creating their masterpiece, each laying down their individual brushstrokes that will someday come together to form a gestalt portrait of the addicted brain. **VM**



LYN NOLAND, WITH SHELBY AND SAWYER

I'm Lyn, and I'm an Addict.

I was standing in the kitchen with Steven, my 6-month-old son on my hip when I heard a commotion outside. I peeked out the blinds to see police cars in the driveway and heard a scuffle around the back of my house. We were surrounded.

April 14, 2002, is a day I will never forget. The police knocked on my door and asked if they could come in and look for "Charles." I said "sure." I thought I had my stuff outside. I figured if I didn't let them in, they'd think I had something to hide. I was too slick for them anyway, or so I thought.

My partner in crime had come in early that morning and brought in a big black duffle bag we usually hid in the woods. It had the ingredients for our "cook" that day. She was making sure we had everything we needed. I knew she had a warrant out for her arrest, so when I saw who was knocking, I ran back to the bedroom, Steven in tow, and told her to get in the closet. There was only one problem. She left a mason jar of acetone on the floor by her nightstand. When the police saw it they told me to go outside and take the baby, they'd be searching the rest of the property.

I went to jail that day and my son went to foster care. My 9-year-old daughter went to live with her dad. My life had exploded, worse than any lab I'd ever seen. I was eventually charged with manufacturing over 100 grams of methamphetamine. I thought I had ruined everything and my kids and I would never be able to have a normal life. I thought that if the police would have just left me alone, I would have been OK. We would have been OK. It was all their fault. I wasn't hurting anybody. Why couldn't they just leave me alone?



I remember as a child, craving the attention of my parents. My dad was a truck driver and was gone most of the time, and my mother was always in bed with some kind of ailment. She had a shoebox full of pills under her bed and I would watch her sleep wondering sometimes if she would ever wake up. I must have been fairly young at the time because I was only tall enough to look right at her face as she slept. When she wasn't asleep, she was gone. I remember one time I came home at 5 from Brownies, and no one was home. She had forgotten about me, and I was locked out of the house. Her nice new Cadillac was there though, and back then the cigarette lighter would work even without the car being on. I was so cold, and it was getting dark so I curled up in the car and kept pushing in the lighter and warming my hands until I fell asleep. Sometimes I wondered if I disappeared, how many days would it take them to notice.

When I got to high school I became the overachiever. I wanted so much to be important to someone, anyone. I made straight A's, was in every club, was the class clown and was always in the local paper for community service projects. By this time my dad had divorced my mom and started a new life in another town with another family. I

WRITTEN BY **LYN NOLAND**
PHOTOGRAPHY BY **KRISTINA MARIE KRUG**

saw him even less. I became more like my mother's roommate instead of her daughter. I came and went as I wanted to and started drinking at parties with my friends. I remember she told me once to "be home early." I laughed at her and said, "When did you wake up and decide to be my mom? Oh, I'll be home early all right, early in the morning!" and slammed out the door. She never told me what to do again.

.....
Right after graduation, I went to summer school at UT Knoxville. I was from a small town and was ready to see what the world had to offer. This is when my drinking really took off. When I was drunk, I was funny, pretty, and people liked being around me. I could be whoever I wanted to be. Handsome men would buy me all the drinks I wanted. I was the "party girl." Everybody who was anybody called me to see where the best parties were going to be. Alcohol had filled that hole in my stomach that was making me incomplete. I was finally important.

I lasted a few more years in Knoxville before deciding on a geographical cure to slow down my drinking. Three towns and four moves later, I found myself in Crossville where I tried cocaine for the first time. I really liked coke. I used it every weekend and became the life of the party again. I married a wonderful man from Crossville, but he didn't want to party like I did, so I divorced him and moved once again, this time to Cookeville with my beautiful daughter, Shelby. It was in Cookeville at a party at my own house that someone first offered me meth. They said, "if you like coke, you'll love this," and I did!

.....
I always had great jobs in sales and marketing and I was good at it, so I made a decent living for Shelby and me. I drove a nice car, had a nice house, good friends. I was a young professional,

a PTO mom. I went to Chamber functions, Country Club Parties and chaired charity events. I had everyone fooled, but not for long.

Meth took over my life. Within a matter of months, I went from using on weekends to using every day. I didn't make the money I used to make, because I wasn't on my game any more. I started buying ephedrine pills, iodine and other ingredients to trade so I could stay high. I supplied several cooks with what they needed, and they kept my pockets full. They also started teaching me the parts of the cook process. Then I was not only hooked on meth, but hooked on the cook. About that time I just quit going to work. I didn't have time. I was too busy using and finding ways and means to use more. I had quit answering the phone to my old friends, family, everyone except the people I used with. I didn't go to clubs any more and had stopped drinking. I only wanted to be around people who used like me, all day, every day.

.....
Then I found out I was pregnant. I slowed down using, but didn't completely stop. I did quit cooking and being around labs. I really wanted to stop using for my baby, but I couldn't lift my head off the pillow without it. I had become physically dependent and couldn't function without getting high. Well, I really wasn't getting high much any more, just trying to be able to function and get through the day. Toward the end of my pregnancy I would go several days and even weeks without using, but it was horrible. As soon as I had Steven, I was off to the races again. I was using more, cooking more and taking more chances than I ever had taken before. Even through all of this, I always thought I was a good mother. My kids never saw me use and never wanted for anything. They meant the world to me, then they were gone.

I was in an old county jail cell built

for 12, with 30 other women. People tell me "you don't look like the jail type." Well, who is? No one's kindergarten dreams are to grow up and go to jail. After a couple of months, someone told me I could get out early if I went to rehab. I didn't really think I'd stop using, but I had lost everything while I was in jail. I figured I could get clean long enough to please my probation officer and get my kids back; I could fool everybody for that long. While I was in treatment I started to hear things from the literature and groups that really hit home. They had written books about me, well, people like me. I realized that I was an addict. There were other people like me, and they had gotten clean and stayed clean. Everybody says that meth is hard to kick, but if other people could do it, I could too. If I wanted to have any kind of life for me and my kids, I had to.

I left treatment and went to a halfway house in Nashville. I knew if I went back home, I'd use again. Everyone I associated with there used and cooked. I stayed in halfway for almost six months. I went to 12-step meetings, got a sponsor, and started actively working a recovery program. I moved into a recovery apartment and had a beautiful baby boy in September of 2004. Sawyer's dad is a man I met in early recovery; he's using again now and who knows where he is. In November of the same year, Steven came home. Shelby still lives with her dad and comes to my house on weekends, holidays and a lot in the summer. I feel as though I have disrupted her life enough. We don't have much, but my kids and I are happier than we have ever been. The little things mean so much now, especially since I can remember them.

.....
Today I work as an Admissions Director and Drug Court Liaison for TLC Housing, a transitional living center for men and women in recovery. I sponsor other people, do service work within



my 12-step home group, and go to jails and prisons to tell my story. I am taking classes to become a Licensed Alcohol and Drug Counselor and am involved with the Meth Free TN anti-meth campaign. I am going on three years clean by taking one day at a time and relying on God's will, not my own. It is my mission to let people know that you can recover from meth. It is possible. I am proof. You never, ever, have to use again. If I can reach one other person, my job will be done.



Hundreds of kids in the state of Tennessee go to foster care each year due to meth-related cases. I wonder if those kids feel like lost children? Will they grow up to use, just like their parents? It

is up to us to stop this cycle. I have stopped it in my family just in time.

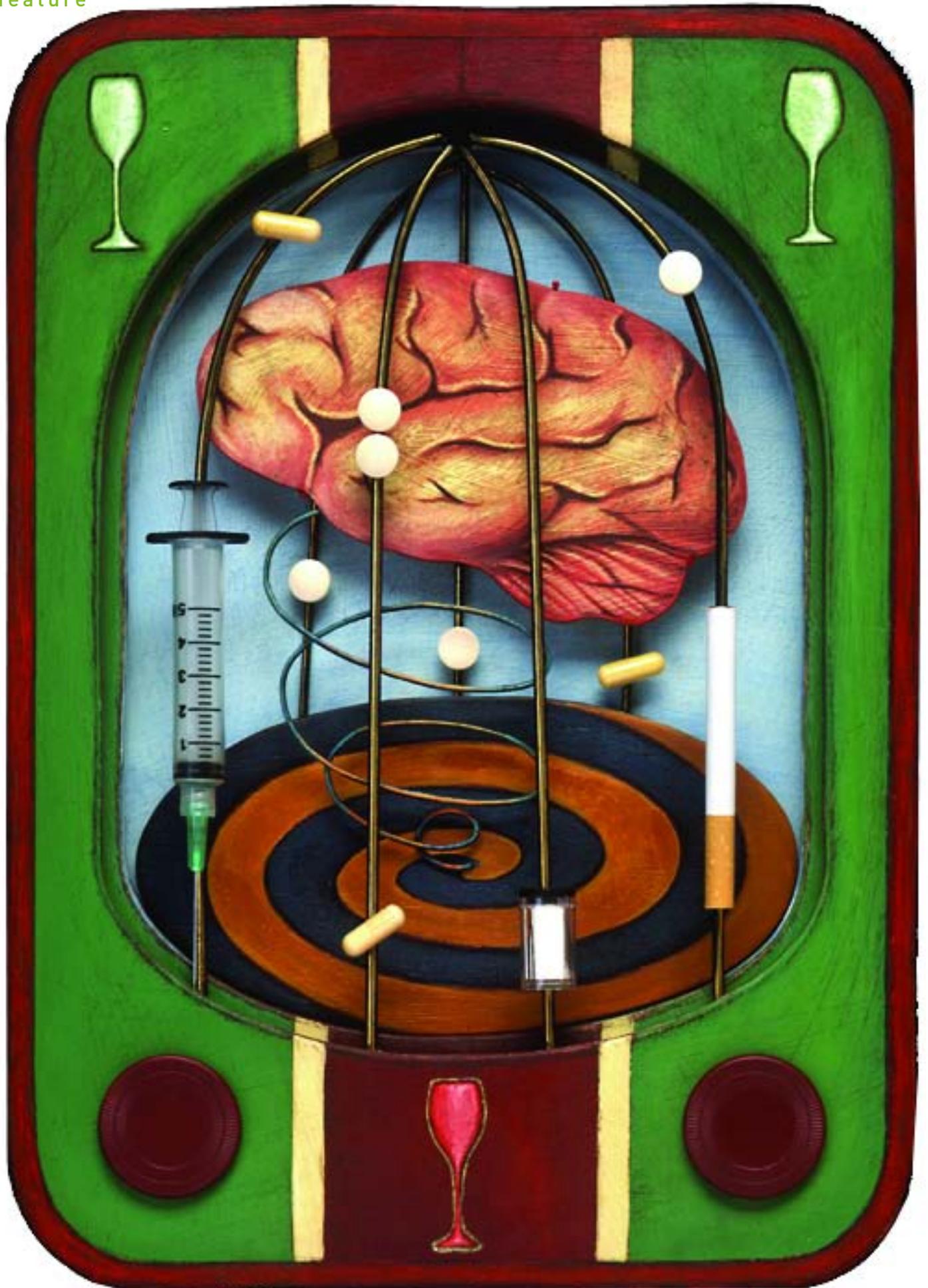
My life has meaning and purpose now. I have filled that hole in my stomach that has kept me miserable most of my life. I didn't fill it with alcohol, cocaine, or even meth, but with the love of my children and the hope of our future. My experience is real, my strength is truth, and my hope is recovery.



My name is Lyn, and I'm an addict.....and my story has just begun. **vm**



Everybody says that meth is hard to kick, but if other people could do it, I could too. If I wanted to have any kind of life for me and my kids,
I had to.



THE



BRAIN

Neuroscientists probe how drugs of
abuse take control of the brain's circuitry

IT STARTS SIMPLY – a snort, a puff, a drink, a rush of warmth and well-being, a rush of pleasure. For some individuals, the first snort leads to another, then another. Soon it takes more drug to get that same rush, and before long the person may need the drug just to feel normal. Along the way, what started as recreational drug use morphs into compulsive drug use: addiction.

“We’re usually in control of our actions and choose not to engage in self-destructive behaviors,” says Randy D. Blakely, Ph.D., director of the Center for Molecular Neuroscience at Vanderbilt. “But once an addiction takes hold, the person is in a sense powerless and is compelled by forces outside of their control. Another person looking at them would say, ‘you can prevent this.’ They can’t.”

It’s as if the brain is in prison, captive to the neurobiological changes wrought by its chemical jailers. The captive brain somehow drives an addicted individual to continue taking a drug, despite known adverse consequences – to health, to personal and family relationships, to career.

“What is it that compels a smoker who has emphysema and is about to lose a lung, for example, to continue smoking outside the hospital waiting room,” wonders Danny G. Winder, Ph.D., a neuroscientist who is tracking how the brain responds and adapts to chronic drug exposure.

“Our hope is that by understanding, at a molecular level, how drugs of abuse change neural circuitry, we will identify targets for new therapeutics to treat addiction,” says Winder, associate professor of Molecular Physiology & Biophysics.

Sensing reward

Drugs of abuse are diverse chemical substances. They act on different molecular targets, in the brain and in the periphery, to elicit distinct acute effects.

Psychostimulants like cocaine and amphetamines, for example, act on proteins called neurotransmitter transporters and lead acutely to increased levels of the neurotransmitters dopamine, serotonin, and norepinephrine. They produce adrenaline-like effects – increased heart rate, blood pressure and metabolism, and feelings of exhilaration and energy.

Opiates such as heroin, on the other hand, interact with a family of receptors that tend to blunt nerve cell activity. Along with a sense of euphoria comes pain relief, drowsiness, and slowed breathing.

Despite their distinct molecular targets and acute effects, all drugs of abuse tap into the brain’s “reward system” – a set of neuronal connections that tell us a stimulus is enjoyable and prompt us to

WRITTEN BY **LEIGH MACMILLAN**
ILLUSTRATION BY **MARIA RENDON**

repeat it. Food and sex activate the same circuitry, which may have evolved to promote our survival.

Using animal models – rats, mice and non-human primates will self-administer the same drugs that humans abuse – and more recently with human imaging, investigators have begun to map the neuronal connections of the reward circuitry.

A key component of this system is the pathway from the ventral tegmental area (VTA) located near the base of the brain to a structure beneath the frontal cortex called the nucleus accumbens. The long projecting axons of the VTA nerve cells release the neurotransmitter dopamine onto neurons in the nucleus accumbens, and drugs of abuse along with food-seeking behavior, sex and even playing video games engage this “dopaminergic” system, Winder says.

The flood of dopamine onto nucleus accumbens neurons appears to be critical for the “reward” response to these drugs. Animals with experimental lesions of the VTA-accumbens connection no longer show interest in self-administering drugs of abuse, Winder notes.

“This circuit plays an important role, but it’s obviously not the whole story,” Winder says. “We don’t get addicted to everything that causes dopamine release.

“There is some interface between the drug itself, its potency, the genetic predispositions of the individual, and the specific environmental influences that come together to cause only 10 to 20 percent of the individuals who are exposed to substances of abuse to become addicted.”

Although most people who try drugs of abuse do not become addicted, “those that do face a lifelong problem,” Winder

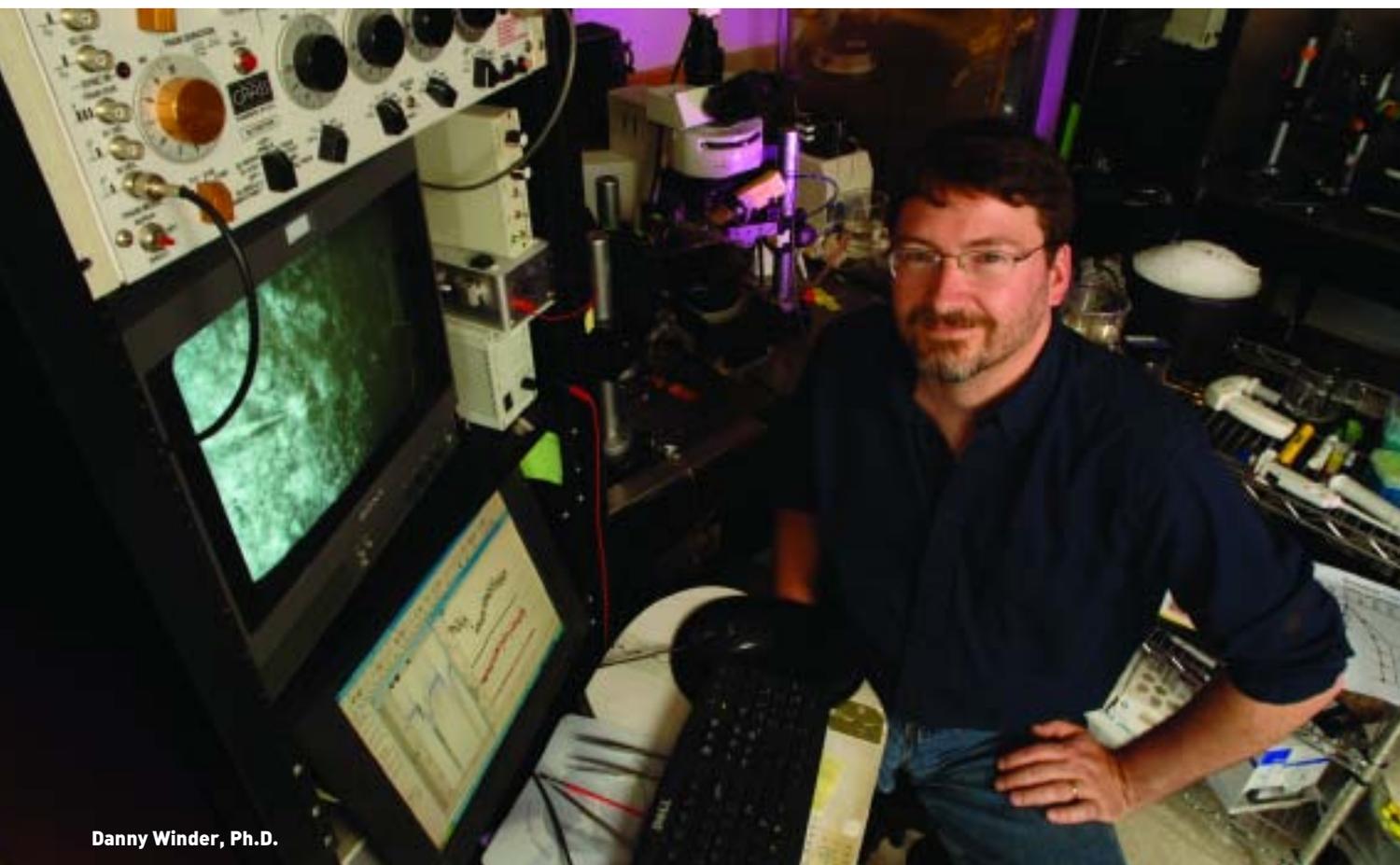
says. While it can be relatively straightforward – within treatment programs – to “detox” an addicted individual, the rate of relapse to drug abuse is very high, he notes.

“Our interest is in understanding the long-lasting changes in neuronal function that mediate this relapse behavior,” Winder says. “It seems like that’s the best target for finding new treatment options for addiction.”

Pathological learning

As a postdoctoral fellow, Winder worked with Nobel laureate Eric R. Kandel, M.D., at Columbia University. Kandel’s team has long focused on the neurobiological mechanisms that could underlie learning and memory. The training turned out to be perfect for Winder’s jump to addiction-related research.

“Addiction is often talked about as a



Danny Winder, Ph.D.

ANNE RAYNER

Through the turnstile

Transporter proteins mediate initial actions of psychostimulants

In the moments that follow a hit of cocaine, drug molecules pulse through the body, landing ultimately in the grooves of their molecular targets – neurotransmitter transporters.

The transporters are something like clanking turnstiles, says Randy D. Blakely, Ph.D. Dopamine, serotonin, and other chemical messengers (neurotransmitters) pass through them, moving out of the void between two nerve cells – the synapse – and back inside the “presynaptic” neuron, where they can be re-packaged for future use.

Cocaine blocks the turnstile specific for dopamine, leaving dopamine hanging out in the synapse, where it can continue to signal. This overload of dopamine in the brain’s “reward system” is key to the pleasurable and addicting effects of cocaine, Blakely says.

Amphetamines, too, affect the dopamine transporter’s activity, but instead of blocking the turnstile, they seem to send it spinning in reverse, spewing dopamine out into the synapse.

“The dopamine transporter (DAT) has historically been the number one target thought by many to underlie at least the initial actions of amphetamines and cocaine, in terms of their psychostimulant and rewarding properties, and in terms of their addictive liability,” Blakely says.

Blakely and fellow Vanderbilt investigators Louis J. DeFelice, Ph.D., and Aurelio Galli, Ph.D., make a formidable team in the effort to understand the transporter targets for cocaine, amphetamines, and other psychostimulants. They’ve made inroads into characterizing how these transporters work at the molecular level and how genetic changes in these proteins may contribute to disease.

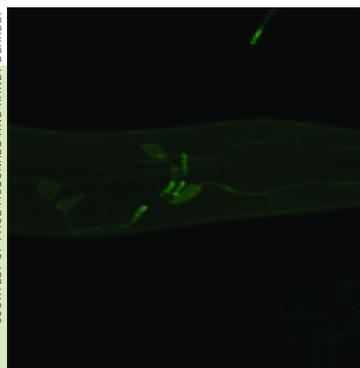
DeFelice and colleagues discovered a few years ago that in addition to moving neurotransmitter molecules across the membrane, the DAT also alters the electrical properties of the neuron, affecting its ability to send signals. The challenge now, he says, is to figure out how a transporter can have such a split personality: how does the cell regulate whether it has transporter-like or electrical channel-like properties?

Galli and collaborators at Vanderbilt and Columbia University have been pursuing the question of how amphetamines affect the DAT. Several years of studies have revealed that amphetamines promote the redistribution of the DAT off the cell surface, that they cause dopamine to rush out of the cell through a channel in the transporter, and that a modification of the transporter called phosphorylation is likely required for amphetamine actions.

Galli’s findings suggest that the DAT can be both transporter and channel. And because amphetamine and dopamine have different effects on the DAT, it may be possible to treat

Green fluorescent dopamine transporters “glow” in a nematode worm.

COURTESY OF PAUL McDONALD AND RANDY BLAKELY



addiction by shutting down the drug-related channel activity while leaving the normal, physiological transporter activity alone, Galli says.

“We think we’ve identified a region of the transporter molecule that

is of real importance for amphetamine action,” he adds. “It might be a good target for new therapeutic agents that block the effects of amphetamine-like psychostimulants.”

Because proteins like the DAT play a role in the initial signaling for drugs of abuse, they may participate in predisposition for abuse liability, Blakely notes. “The key here is not to focus on the transporter but to focus on the system,” he says. “There are a lot of molecules that control how dopamine works – how it’s made, how it’s transported, how it’s broken down.”

To this end, Blakely’s team has turned to a simpler model system, the nematode worm *C. elegans*. The investigators have engineered worms to express a fluorescent DAT, so that it can be visualized – the worm’s eight dopamine neurons “glow” green – and followed in a living organism.

“We’ve been able to watch where the DAT goes in an intact nervous system, and how genetic mutations affect its localization,” Blakely says. His team is continuing to use genetic approaches to screen for genes that regulate the DAT and that are required for supporting amphetamine-induced behaviors in the worm.

The transporter field was excited last year by the publication of the X-ray crystal structure for a bacterial transporter protein.

“This is the ‘Rosetta stone’ for our protein,” Blakely says. “We are now taking our human dopamine and serotonin transporter proteins and threading their structures onto that backbone.”

The serotonin transporter is a target for both cocaine and the amphetamine-like molecule MDMA – Ecstasy. Having a structural model for the serotonin transporter is allowing the investigators to move very quickly to questions about where MDMA binds to the transporter, how that binding is different from antidepressants and from serotonin, and how it triggers the transporter to run in reverse, Blakely says.

“I think we’re getting a handle on the molecular actions of these substances.”

Blakely is the Allan D. Bass Professor of Pharmacology, professor of Psychiatry, director of the Center for Molecular Neuroscience, and an investigator of the Vanderbilt Kennedy Center for Research on Human Development. DeFelice is professor of Pharmacology. Galli is associate professor of Molecular Physiology & Biophysics.

— LEIGH MACMILLAN AND MELISSA MARINO

“This increased interest in relapse behavior has really been an exciting development in the field of addiction research.”

pathological form of learning – pathological learning,” Winder says. “Many of the same molecules that are involved in classical learning and memory in the hippocampus (a brain region) are also involved in addiction.

“And relapse-related behavior is a lot like retrieval of a stored memory – the same types of stimuli that promote memory retrieval will promote an addict to reinstate drug-using behavior.”

Investigators studying learning and memory have worked out mechanisms that regulate nerve cell “plasticity” – the Play-Doh-like capacity for change in connections between neurons. Sometimes activity between two neurons is strengthened; sometimes it is reduced. And somehow the overall effect of these nerve-to-nerve cell changes allows us to learn and to remember.

In the hippocampus, the brain region thought to be most critical for learning and memory, certain types of short-term stimuli can enhance a neuron’s response to the excitatory neurotransmitter glutamate for many hours. This phenomenon, called “long term potentiation” (LTP), and its cousin “long term depression” (LTD) could account for the lasting changes in neuronal communication that constitute memories.

The last several years have seen a push in the addiction field to search for evidence that drugs of abuse engage these sorts of plasticity mechanisms in regions of the brain’s reward circuitry, Winder says.

“We know now that a single dose of cocaine to an animal induces LTP in the ventral tegmental area,” Winder says.

“What this means is that a single dose of cocaine makes it possible for regions signaling to the VTA to more easily promote dopamine release to the accumbens. This could theoretically heighten response to drugs of abuse.”

Heightened response means a greater sensation of reward and an increased likelihood of continued drug consumption.

Preventing relapse

Winder’s particular interest in “relapse” behavior has directed his laboratory toward a brain region called the extended amygdala, in particular the “bed nucleus of the stria terminalis.” This tongue-twister of a brain region is key to reinstatement of drug consumption in animal models of stress-evoked relapse.

The model goes like this: rodents (rats or mice) are trained to press a lever to self-administer a drug of abuse through an intravenous line – Winder and colleagues are studying cocaine’s effect. After the rodents reliably self-administer cocaine, the drug is removed to “extinguish” the behavior. At first the rodents continue to press the lever, even more frequently, in their attempts to get the drug, but over time they realize there is no drug and the lever-pressing returns to a low baseline level.

Now, the investigators tempt these “clean” rodents to reinstate their drug-consuming behavior – to relapse. They do this by stressing the rodents, with mild intermittent shocks to the feet or with forced swimming tests. Following these stressors, the rodents once again resort to lever-pressing to try to obtain cocaine.

Stress, Winder notes, is the most widely cited reason – by addicted individuals – for relapse. Exposure to drug paraphernalia and environmental situations, like being with the same group of friends, can also promote relapse. It is likely that stress-, cue-, and context-induced reinstatement of drug consumption all engage different neural circuitries, Winder says.

“The stress-induced reinstatement model in rodents is really nice for working out the important neural circuitry,” he says. “If we can identify receptors or combinations of receptors that are involved, we can think about using ligands targeted at those receptors to treat, or maybe even prevent, stress-induced reinstatement.”

In the bed nucleus of the stria terminalis – the brain region that plays a key role in the reinstatement behavior – Winder and colleagues have been characterizing a “long term depression” form of synaptic plasticity – a persistent weakening of neuronal communication. They recently reported that a specific signaling molecule called extracellular-signal regulated kinase-1 is required and that multiple exposures to cocaine dramatically reduce this plasticity.

These results and data from other groups are coming together to suggest hypotheses for mechanisms underlying relapse behavior.

“This increased interest in relapse behavior has really been an exciting development in the field of addiction research,” Winder says.

More investigators are looking for the lasting molecular changes that can explain how drugs of abuse continue to control the captive brain, even long after their consumption has ceased. These efforts may one day lead to the design of medications that can counter these effects and truly free the addicted brain from its chemical prison. **VM**

President's Corner

With more than 2,500 members, 31 CRS scholars and over \$14 million in unrestricted and restricted gifts in 2005, the Canby Robinson Society is stronger than it has ever been. Your commitment is definitely making a difference in patient care, education and research at our medical center.

Spring is always a busy time for us. We hosted our third annual dinner for the prospective CRS scholars during the Medical School's Second Visit Weekend. The following day the prospective scholars shadowed one of our current scholars. This was a great opportunity for those students who have been offered a scholarship to interact with current CRS scholars and the CRS Selection Committee, and has proven to help with recruiting these very talented and highly sought-after students.

Another successful endeavor has been our regional dinners and we are co-hosting two more this spring with the Office

of Medical Alumni Affairs, one in Knoxville, Tenn., and another one in Greensboro, N.C.

Match Day was on March 16, and our CRS scholars will be doing their residency programs as follows: Tim Lautz, Northwestern McGaw/NMH/VA in Chicago, General Surgery; Purvi Shah, Northwestern McGaw/NMH/VA in Chicago, Internal Medicine; and Claire Turchi, Stanford University Programs, Palo Alto, Calif., Emergency Medicine.

Class Day was May 11, and the CRS presented a very special award which is given annually to the fourth-year student who is voted by his or her classmates as having the intangible qualities of common sense, knowledge, thoughtfulness, personal warmth, gentleness and confidence that combine to make the "Ideal Physician," the person fellow classmates would most want to have as their personal physician.

On behalf of the Canby Robinson Society, I would like to thank Fran Hardcastle for her dedication and leader-

ship for the past two years. Her commitment to the Medical Center is unsurpassed, and I am grateful for her service.

I enjoyed seeing so many of you at our annual dinner on May 20. Thanks for all you do for Vanderbilt Medical Center!



Missy Eason
Director of Donor
Relations,
VUMC

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



LONNIE BURNETT, M.D.

Welcoming a new president

The Canby Robinson Society welcomes Lonnie Burnett, M.D., the Frances and John C. Burch Professor of Obstetrics and Gynecology at

Vanderbilt, as its new president.

He succeeds Fran Hardcastle in the role.

Burnett, on the Vanderbilt faculty since 1976 and former chair of Obstetrics and Gynecology, is well recognized not only for his contributions to gynecological oncology and urogynecology, but also as a major force in the John Hopkins' School of Medicine's alumni organization. He has been a Canby Robinson Society member since 1988.

One of Vanderbilt's largest professional societies is named after Burnett –

the Lonnie S. Burnett Vanderbilt Ob-Gyn Society. Founded in 1989, the society includes more than 500 past and present Vanderbilt ob-gyn residents, faculty, fellows and Vanderbilt University School of Medicine graduates specializing in obstetrics and/or gynecology.

Burnett came to Vanderbilt from Johns Hopkins, where he trained and then served on the faculty.

Burnett says he is excited about his role in the CRS and already has goals in mind.

"I want to increase Vanderbilt faculty membership in the Canby Robinson Society," Burnett said. "Currently faculty membership is at about 33 percent and my goal is to increase that by 50 to 100 percent," he said. "My plan is to begin with the faculty in the Department of Obstetrics and Gynecology and then move to other departments. Because I served as chair of Obstetrics and Gynecology for 19 years, and have been

on the faculty since 1976, I have personal friendships with many faculty in most departments which will enhance my ability to promote membership in the CRS.

"Vanderbilt faculty are very committed to doing everything possible to promote the success and recognition of the Vanderbilt University Medical Center, and they are very giving in support of the Medical Center and their departments. I plan to provide information which will make it very easy to give to any area of interest."

In addition to his leadership in the CRS, where he has served on the Board of Directors, Burnett has also led the Vanderbilt Community Giving Campaign and is currently a member of the School of Medicine admissions committee.

– NANCY HUMPHREY

Six new members join Canby Robinson board

The Canby Robinson Society board welcomes some new members and a few returning members who are again answering the call to further the goals of the board. These members join second-term board members, Jane Jacques and Addison Scoville III.

Raymond Martin, M.D.

Martin's history with Vanderbilt dates back to his birth. He was born in Medical Center North where his father was a surgical resident. Martin received a B.A. degree in Mathematics, Chemistry and Molecular Biology from Vanderbilt in 1972. He is currently a clinical associate professor of Surgery and a vascular and general surgeon and chief of surgery at Saint Thomas Hospital. He has taught surgery to Vanderbilt students and residents at Saint Thomas Hospital for 20 years. "Vanderbilt is my alma mater, and I feel blessed to live where I went to college and to be able to participate in both undergraduate and medical school activities," he said. He joined CRS because he believes talented

students should have the opportunity to attend Vanderbilt Medical School, regardless of financial status. As a board member he also hopes to foster the relationship between VUSM and local alumni.

Clifton Meador, M.D.

Meador has been affiliated with Vanderbilt for 58 years, first as a student, then as a resident, fellow and faculty member. He directed the VU residency program at Saint Thomas from 1973 to 1998. He is currently a professor of Medicine at VUMC and executive director of the Meharry-Vanderbilt Alliance, a position he has held since 1999. "I owe almost all that I am professionally to Vanderbilt. I left South Alabama in 1948 from a rural high school and discovered the larger world of intelligence at Vanderbilt. I was truly enlightened by nearly all of my experiences at Vanderbilt over a 58-year span. I hope I can put back into Vanderbilt something in return for what I got, and maybe some of it will affect others in the same way," he said.

Tom Flood

Tom Flood has been associated with The Bill Wilkerson Center for about 15 years, primarily as a board member. As the former chief financial officer for Tractor



Left to right, front: Peggy Wood, Jerry Williams; Left to right, back: Raymond Martin, Addison Scoville III, Clifton Meador, M.D., Tom Flood.

Supply Company, he was in charge of the company's charitable contributions, which included The Bill Wilkerson Center, and he went on to play an instrumental role in its merger with Vanderbilt. He was asked to remain as part of the newly formed Vanderbilt Bill Wilkerson Center and to serve on the Advisory Board; he is currently the board's chair. Retired from Tractor Supply Company, Flood spends his time working with the VBWC in planning charitable giving with the development office at Vanderbilt. "My joining the CRS board has somewhat of a selfish purpose," he said. "I hope to learn more about the workings at Vanderbilt in order to find more ways to help the continued progress at the VBWC and to help make that progress move faster."

Jerry Williams

Jerry Williams is the past president of Friends of Children's Hospital and co-chair of the Palm Sunday Paper Sale. She is also

Fodys' gift to Vanderbilt endows chair in Pathology

Edward Fody, M.D., MD '75, HS '75-'78, and his wife, Nancy, have funded the Edward and Nancy Fody Chair in the Department of Pathology at Vanderbilt University Medical Center. They made the gift in hopes of strengthening the department, to which he owes much, Fody said.

Fody started his long and prestigious career in Pathology at VUMC where he also served his residency from 1975 until 1978. He is currently chief of Pathology at Holland Hospital in Holland, Mich.

"I always liked pathology as a medical student," he said. "The department at Vanderbilt was very strong, and I thought

Drs. (Robert) Collins, (John) Shapiro, (David) Page and (William) Hartmann were excellent role models. I also, liked the scientific aspects of pathology," Fody said.

Fody, who has led pathology departments at the University of Arkansas, Bethesda Hospital and Erlanger Medical Center, said the biggest change that he has seen in the field of pathology is the greatly expanded diagnostic capacity of both anatomic and clinical pathology.

"When I first started out, often all we had were sections in anatomic pathology. Now we have so much more - immunocytochemistry, flow cytometry, cytogenetics, etc. And things are so much faster," he said. "This week my laboratory started

operating rapid tissue processing. That means that we process tissues all day, not overnight. We offer same-day biopsy service. This would have been unheard of just a few years ago. In the clinical laboratory, the same thing has occurred. Microbiology and blood bank, once completely dominated by manual methods, are now becoming fully automated. The new analyzers do so many tests rapidly and inexpensively, and the computer systems get the data out fast."

Fody said what he remembers most about Vanderbilt is the feeling of family. "Many fellow students became close friends, and this was also true for the faculty. There are lots of good memories."

Nancy Fody also has a background in medicine. She was an undergraduate

a former member of the Children's Hospital Board as well as the CRS Board. She is currently the executive director of Leadership Nashville. Vanderbilt is the reason she and her husband, Ernie, are in Nashville, she said. They moved here in 1976 when Ernie joined the Treasurer's Office to manage Vanderbilt's endowment. "We enjoyed his affiliation with the University and since then have been loyal supporters, particularly of Children's Hospital. As a former CRS Board member, I know the vital role this organization plays in providing support for deserving medical students. I believe in its mission and am honored to be asked to be a part of this endeavor again."

Mary Frist Barfield

Mary Frist Barfield has served on the Vanderbilt Alumni Board, the Peabody Alumni Board, the Nashville Vanderbilt Club Board, the Friends of Children's Hospital Board and as co-chair of the Peabody Roundtable and also Homecoming Chair. "Vanderbilt has always played a significant role in my life. I grew up in a family that was deeply involved with the University and supportive of its significant roles in the quality of life in our community and of its success in providing an invaluable education and wonderful

chemistry major at the University of Wisconsin when Fody was a graduate student there. They have been married for almost 32 years. Nancy is now retired from the med tech industry, is a CPA with an M.B.A., and runs her husband's practice.



Edward and Nancy Fody at the Iditarod in Alaska.

opportunities to so many." She and her husband, Lee, a Vanderbilt graduate, have passed their legacy on to their children. Two of their daughters are Vanderbilt graduates, and their son is a first-year medical student. "I am pleased to have the opportunity to further serve Vanderbilt and to learn more about the Medical Center and its mission of educating future doctors. It will be a wonderful opportunity to learn about advancements in medical research and technology and Vanderbilt's role in addressing the many difficult issues confronting health care."

Peggy Wood

Peggy Wood, VU '51, is returning to the CRS Board after serving on it in the 1980s. She is a volunteer at the Vanderbilt-Ingram Cancer Center and is an emeritus member of the Board of Overseers of the Cancer Center. "I am serving on the CRS Board because they asked me to do it. It's fulfilling. I enjoyed it a lot the first time when I was on the scholarship committee. Who wouldn't want to help out all of those young people?"

- KATHY WHITNEY

CRS students spearhead clinic in underserved community

Two years ago, Vanderbilt medical student and Canby Robinson Scholar Katie Cox read an article in a medical journal about health clinics that are run by medical students. The idea piqued her interest, and she shared the information with her classmate and fellow CRS scholar, Kristina Collins.

What began as a conversation during lunch that day became reality a few months ago. Collins and Cox, now third-year students, opened the Shade Tree Family Clinic in September, and are helping provide much-needed free health care to Nashville's underserved community.

"When Katie and I began working on the clinic during our first year, I had no idea how meaningful the project would become. As co-founder of the clinic, it has been incredible to have the rare opportunity to see a program develop from the initial idea all the way to becoming an actual piece of the community," Collins said.

The clinic, located in East Nashville, provides care to all who come through its doors. Aside from providing health care to people with no health insurance, the clinic also provides acute care to people who may have a regular doctor but can't leave work or find child care so they can go to the doctor during regular business hours.

Vanderbilt University School of Medicine operates the clinic with the support of Vanderbilt University Medical Center and United Neighborhood Health Services. The clinic is run by Vanderbilt medical students (in all stages of training) and volunteer attending physicians. They work out of the space provided by United Neighborhood Health Services, a community organization with several clinics around town. Robert Miller, M.D., is the medical director of the clinic. Second-year medical students Dana Guyer, also a CRS scholar, and Sara Horvitz are the current medical student directors of the clinic.

The clinic is open on Tuesdays from 6 to 8:30 p.m. and on Saturdays from

(continued on page 34)



Organizers of the Shade Tree Family Clinic, left to right, Dana Guyer, Kristina Collins and Katie Cox, all CRS scholars, and Sara Horvitz, pose with other volunteers at the clinic's opening.

WHERE ARE THEY NOW? ROB PECK, M.D.

After graduating from Vanderbilt Medical School in 2003, Rob Peck, M.D., and his wife, Liz, headed to her hometown of Boston, Mass., where Rob is now in his third year of a Medicine/Pediatrics combined residency at Massachusetts General and Children's Hospital. He has one year left of his residency, and he and Liz, a nurse practitioner, have big plans for what they will do next.

"Liz and I plan to go to Africa for a couple of years to work with HIV-positive children and adults," he said. "We have applied to the AIDS Corps and will likely do that. We will be working in the meds/peds clinics administering medications that are newly available. We will likely be in South Africa for two to three years and then we will reassess. At that time, I may decide to do a fellowship. This is something we have always thought about doing. We both traveled a lot growing up and there is so much need there. We see it as an opportunity to contribute."

The couple's fathers knew each other in graduate school, and Rob and Liz attended the same nursery school as toddlers. They reunited at Covenant College many years later. They have a

baby girl, Bridget Marie. The three of them enjoy the great outdoors in their free time.

Rob said he is grateful for the opportunities afforded to him by the Canby Robinson Society.

"The Canby Robinson Society scholarship is the reason I went to Vanderbilt. It was a relief to receive it and it freed me from a lot of worries about finances and the need to work outside of school. Because of the CRS scholarship, I was able to focus on learning and getting everything I could gain from Vanderbilt, including conducting research and traveling abroad," he said.

- KATHY WHITNEY

Rob Peck, M.D., with wife, Liz, and Bridget Marie.



(continued from page 33)

noon to 3:30 p.m. The students provide acute care for people with a range of problems from sinus infections to heart palpitations to sexually transmitted diseases. They perform well-child checkups and physicals for adults. They also manage chronic diseases such as hypertension and diabetes.

"The response has been fantastic," Cox said. "We expected to see only a few patients per week for the first few months until we became better known in the community, but within the first six weeks of operation, we were averaging between 20 to 30 patients per week. We have also gotten a great deal of support from the Vanderbilt faculty. They have been wonderful in volunteering their time to care for patients who come in to the clinic."

Funding is provided through private donations from Newman's Own Foundation (actor Paul Newman's charitable organization), the Rasmussen Foundation, and several Vanderbilt alumni. VUMC provides free laboratory testing. Cox and Collins are currently in the process of applying for grants and are always looking for new ways to raise funds and recruit people who are interested in helping support the clinic.

"It is an amazing experience to walk into the clinic, see the waiting room full of patients, work full throttle for the next four hours, and to know at the end of the day that you have actually helped someone," Cox said. "Many of these patients have no other access to health care, so we really get to make a positive difference in their lives. There is absolutely no better feeling than that."

Collins concurs. "Although the clinic can not solve the greater problem of health care access affecting not only Nashville but the nation as a whole, it will continue to impact the lives of those who step through its doors – both the patients and the volunteers."

- KATHY WHITNEY



CRS Board members tour the new adult emergency room with Ian Jones, M.D., seated.

TOMMY LAWSON

ANN H. PRICE, M.D.
Executive Director
for Medical Alumni Affairs



Vanderbilt Medical Alumni Association Awards

The Vanderbilt Medical Alumni Association (VMAA) is pleased to announce that Dr. Robert D. Collins Sr. (MD '51) and Dr. Bert W. O'Malley (former faculty) will be the 2006 VMAA Distinguished Alumnus Award honorees. First bestowed in 1983, the VMAA Distinguished Alumnus Award recognizes an alumnus/alumna whose distinguished career in the medical profession reflects honor on Vanderbilt University School of Medicine. Contributions to the field of medicine as a distinguished clinician, progressive leader, and/or research scientist are criteria considered during the selection process. This year, medical alumni nominated more than 40 VMAA members for this prestigious award. The VMAA is also pleased to announce the introduction of the Vanderbilt Medical Alumni Achievement Award. This award will be conferred for this first time during Reunion 2006 festivities and will recognize outstanding personal achievement by a Vanderbilt Medical Alumnus/Alumna. Both exceptional academic and non-academic accomplishments may be considered in the selection of candidates for the Alumni Achievement Award. The first VMAA Alumni Achievement Awards will honor two exceptional medical alumni, Dr. Sarah H. Sell (MD '48) and Dr. William B. Wadlington (MD '52). The VMAA Distinguished Service Award will be given to Fran K. Hardcastle, immediate past president of the Canby Robinson Society whose dedicated and distinguished volunteer service has significantly furthered the aims and goals of Vanderbilt University Medical Center. Mrs. Hardcastle joins only nine prior winners of this prestigious award which is only conferred "on occasion" when a candidate of exceptional merit is identified. VMAA Alumni Award winners will be honored at the Reunion 2006 Grand Dinner, Friday, Oct. 20, at Loews Hotel, Nashville. All Medical Alumni are invited to attend. Please secure your reservation for this wonderful event through your Reunion 2006 registration. See www.mc.vanderbilt.edu/alum-affairs for online registration, or call (800) 288-0266 for additional information.

Vanderbilt Medical Alumni Directory

With the assistance of our publishing partner, Publishing Concepts Inc. (PCI), we have been updating our Vanderbilt medical alumni database throughout the past several months. If you did purchase a copy of the 2006 Vanderbilt Medical Alumni Directory at the time you updated your data file or if you would like additional copies, please contact PCI at (800) 982-1589. PCI will continue to take phone purchase orders until July. Directories are scheduled for a fall 2006 delivery.

Match Day

Match Day, March 16, was a thrilling day for our fourth-year students. With a standing room only crowd filling 208 Light Hall, students, family, faculty and friends cheered as each envelope revealed another student's professional destiny for the next several years. For a complete list of our students' excellent matches, visit our Web site at www.mc.vanderbilt.edu/alum-affairs.

Worthy of Note News

Perhaps you've noticed the expansion in our Alumni News section – what we term "Worthy of Note" news. Please continue to support this means of communication for announcing marriages, births, new professional appointments/accomplishments, personal achievements, and all those little things your classmates and/or fellow house officers would want to know. Your news is always "worthy of note" to your Vanderbilt medical alumni friends – please let us hear from you. Digital photos (200-300 dpi and at least 4 by 6 inches) are always welcome and will be included as space permits.

Ann H. Price

CONTACT

Vanderbilt Medical Alumni Association
Vanderbilt University Medical Center
Phone: (615) 343-6337
Fax: (615) 322-1892
medalum@vanderbilt.edu

KEY

- MD - Medical School Graduate
- HS - House staff
- FE - Fellow
- F - Faculty
- CF - Clinical Faculty

James Frank Cadenhead, M.D., MD'45, shown here with great-grandson, Garret, retired in 2000 after 54 years of family practice where he estimates that he and his staff delivered 3,000 babies and took care of them afterward. A son, also a physician, moved back to Haskell in 1978 to practice medicine with his father. He and his wife, Billie, have four children, 12 grandchildren and two great-grandchildren.



* Indicates CRS member

30s

***William W. Davis, M.D., MD'37**, loves keeping in touch with his classmates. After interning at Baltimore City Hospital and Johns Hopkins Hospital from 1937 until 1941 in pediatrics, he entered private practice in Beckley, W.Va. He was activated from the Medical Reserves to active duty on Dec. 5, 1940, served in the South Pacific, and retired to the Reserves in 1946. He practiced medicine in Parkersburg, W.Va., and Columbus, Ohio, while active in the Medical Reserves, commanded a series of medical units and retired as Brigadier General in December 1946. He was awarded the Legion of Merit award upon retirement. He married Mary Lydenberg Davis in 1940 and they have four children – Donald, William Jr., Richard and Deborah.

40s

Milt Caster, M.D., MD'49, has been retired for the past 15 years, lives on a golf course and plays tennis. Active in politics, he takes courses at a local university.

***Bill DeLoache, M.D., MD'43/Dec., HS'43-'44**, and his wife, Bond, have been in Greenville, S.C., since 1949. He practiced solo pediatrics for two years, and then with some of his Vanderbilt classmates formed the Christie Pediatric Group, which is still going strong. He left the group in 1972 and set up an NICU at Greenville Memorial Hospital (now the Children's Hospital of the Greenville Hospital System), then retired in 1991. They have two children, Frances and Bill Jr., and six grandsons.

Robert F. W. Heimburger, M.D., MD'43/March, moved with his wife, Elizabeth, from Indianapolis in 1999, where he had lived for 50 years, to Birmingham, Ala., to be near his son, **Douglas Heimburger, M.D., MD'78**, who works in the Department of Nutritional Sciences at the University of Alabama School of Medicine.

***Fred Love, M.D., MD'45, HS'45-'46**, has been honored with the Rotary Club of Delray Beach's "Service Above Self" Award, the most prestigious award conferred by the Rotary Club on a non-Rotarian, according to the *South Florida Sun Sentinel*. Love, a surgeon, worked for the U.S. Public Health Service for 20 years. After retirement, he returned to Delray Beach where he has been a dedicated volunteer for the past 30 years, serving on the Bethesda Memorial Hospital governing board and the Bethesda Hospital Foundation Board in Boynton Beach. He was vice chair of the Palm Beach County Health District, has served on the board of directors for the Community Child Care Center, and remains on the board of the Delray Beach Playhouse.

worthy of note



These six classmates from the VUSM class of 1941 were together at Duncan Preparatory School, spent three years at Vanderbilt in pre-med, and then were medical school classmates. Left to right are: Bill Cayce, M.D., (deceased), B. F. Byrd Jr., M.D., Bill Sumpter, M.D. (deceased), Lamb Myhr, M.D., Don Rhea, M.D., and Frank Stevens, M.D., (deceased).

David G. Stroup, M.D., MD'48, HS'48-'49, retired from his ob/gyn practice in Atlanta in 1992 and moved to Savannah, Ga. He and his wife, Betty, a 1949 Vanderbilt University School of Nursing graduate, plan to move to Brentwood, Tenn., next year to be near their daughter. Their other children live in Atlanta and St. Petersburg, Fla.

50s

Paul H. Barnett, M.D., MD'58, CF'67-'04, is now retired from active practice and is involved with second-year medical students and the physical diagnosis courses at Vanderbilt. He also volunteers one day a week at Faith Family Clinic in Franklin, Tenn. His seventh grandchild, Ashley Barnett Campbell, was born on July 5, 2005, in New Jersey.

Erwin Busiek, M.D., MD'55, HS'55-'56, of Springfield, Mo., is in remission from lymphoma and is staying busy and active. He has always enjoyed yard work and has a large one to practice on; he has also taken on the job of maintenance of a local cemetery.

William Fleet, Jr., M.D., MD'58, HS'58-'60, '61-'62, retired seven years ago at age 65 from the practice of pediatrics in Nashville. His now gives free advice to senior friends about their grandchildren. The year her retired, he was elected Senior Pediatrician of the Year by the Tennessee Academy of Pediatrics. He published his second book in 2005, now in its second printing. He and his wife, Carolyn, are eagerly waiting to see their classmates and spouses at their Quinq reunion in 2008.

***R. Glenn Greene, M.D.**, MD'54, HS'54-'57, no longer sees patients and is doing some administrative medicine with the Owensboro Medical Health System. He and his wife, Virginia, travel abroad and are very happy.

Rex McReynolds, M.D., MD'54, retired from his private pediatrics practice in San Antonio after 43

With millions of Americans unable to get health care insurance, overcrowded emergency rooms and doctors' offices, too little time available between doctors and patients, patient safety issues, a malpractice environment that leads to defensive medical practices, etc., the doctor-patient relationship is in trouble. At the root of this problem lies an important common denominator – the lack of communication and trust between a doctor and a patient.

In a new book, "Building Patient-Doctor Trust: There's More to Medical Care," Frank Boehm, M.D., professor of Obstetrics and Gynecology, MD'65, presents new thinking on a wide variety of issues and controversies relating to health care today – opinions intended to create dialogues between doctors and patients to improve understanding and build trust.

Boehm has come up with guidelines for both patients and doctors, intended to build patient-doctor trust. He is also the author of "Doctors Cry, Too: Essays from the Heart of a Physician."

For more information, visit Boehm's Web site, www.dr-boehm.com.

book review



years, and is now playing golf and enjoying himself in a town he says has outstanding weather, climate, location and people. He has been married for 61 years and has three children and six grandchildren.

***Clovis Pierce, M.D.**, MD'58, recently visited the Vanderbilt campus with his grandson, a prospective undergraduate freshman. In December, he experienced the "other side of health care," and following surgery, wrote, "I am recovering uneventfully although slower than I would like. My only claim to fame is survival."

Walter Stone, M.D., MD'57, settled in Mill Valley, Calif., five miles north of the Golden Gate Bridge. He is teaching residents group therapy at UCSF, writing and is beginning work on the fourth edition of the group therapy text, "Psychodynamic Group Psychotherapy."

Nat Winston, M.D., MD'53, HS'55-'58, is working 10 hours a day and writing a book, "The Child Molested; the Aftermath."

60s

H. Verdain Barnes, M.D., MD'65, HS '65-'66, retired in 2002 near Eatonton, Ga., on Lake Oconee after a career in academic internal medicine. He served as



James Finney Jr., M.D., MD'64, of Birmingham, Ala., (shown here) and Bill Elias, M.D., MD'65, of Roanoke, Va., are both growing Vanderbilt Burr oaks that were grown from acorns collected on campus. They independently bought them as seedlings.

Associate Dean for Information Technology, Professor of Medicine and Pediatrics and Family Medicine and Professor of Medical History at Eastern Virginia Medical School in Norfolk, Va. He currently serves as CEO of Barnes MedLit (BML), a company that provides volunteer peer review for several peer review academic journals, designs and develops medical history software for all types of users including patients, physicians, residents and medical students and offers volunteer teaching in internal medicine and occasional practice coverage for the Medical College of Georgia practice in Lake Oconee. He also teaches medical students at Emory University Medical School where he serves



Anthony Gotto, M.D., MD'65, and his wife, Anita, are delighted to have one of their daughters, Teresa Teague, her husband and their two grandsons, Nicholas and Ali, (shown here with Gotto), in New York City. He was recently named to a new five-year term as dean of Weill Cornell Medical College and is in the midst of a \$750 million campaign at Weill Cornell Medical Center, which includes a new ambulatory building.

worthy of note

Mike Blood, M.D., MD'81, has organized a series of medical mission trips to Les Cayes, Haiti, a partnership between his group, Athens Medical Group, a multispecialty group in Crawfordsville, Ind., and Christian Mission South Haiti. The ultimate goal is to establish a full-time clinic in Les Cayes. Blood and his wife, June, and daughter, Megan, a senior at DePauw University, took the initial trip in March 2005, and in November, they took a group of 15, including four doctors and four nurses from his group. Assisted by five Haitian medical students from the University of the Haitian Academy, they treated more than 750 patients in a week. He returned in April and has hired a full-time nurse for the clinic to do clinical follow-ups on patients treated for hypertension and diabetes.



James N. Johnson, M.D., MD'93, and his wife, Catherine, welcomed their first son, James Stutzner Johnson, on Dec. 26, 2005. He is with the Nashville Orthopaedic Specialists physician group in Nashville and was also recently named the team physician for the U.S. Swimming World Championship Team that competed in Shanghai in April. He will also participate in a site visit with the advance team going to Beijing to see the Olympic Venue for the 2008 Beijing Summer Olympics.

as clinical professor of Medicine. He received numerous awards during his career, most recently the Master of the American College of Physicians Award and the ACP Laureate Award from the state of Virginia. He and Joyce have four children and seven grandchildren.

***John Bassel, M.D., MD'69**, HS'69-'72, FE'72-'73, has joined the Northcrest Clinic and Care Center in Springfield, Tenn., for his continued practice of general internal medicine. He is the preceptor for two nurse practitioners and is on the adjunct clinical faculty of the Vanderbilt University School of Nursing. His children are all grown and on their own – two children have close ties to Vanderbilt. His daughter, Ashley, will be entering her senior year in pre-law and his son, Tommy, who received the Founder's Medal in Engineering, is a computer engineer with Wachovia Bank.

***Stephen Kutner, M.D., F.A.C.S., MD'65**, is the medical director of Jewish Healthcare International, a non-profit humanitarian organization which builds medical infrastructure in communities at risk throughout the world, in partnership with the Ministry of Health, Foreign Ministry of Israel and the

Jewish Agency and Joint Distribution Committee and partnerships in North America including with the U.S. State Department and universities. This is a multi-specialty education focus, which also includes public health, health promotion, and disease prevention seminars and programming.

John Morgan, M.D., MD'66, HS'66-'68, retired two years ago after 31 years of practice in pediatric cardiology. He established the pediatric cardiology program at Children's Hospital of Chattanooga and is professor of Pediatrics at the University of Tennessee. He is enjoying seven grandchildren, including toddler twin girls.

Rebekah Naylor, M.D., MD'68, will become the new third-year clerkship director at the University of Texas Southwestern Medical Center at Dallas.

Larry D. Scott, M.D., MD'69, HS'69-'72, moved to the University of Texas Medical Branch in Galveston, Texas, last June after 29 years on the faculty of the University of Texas Medical School in Houston. He is professor of Medicine, director of the Clinical Motility Program in the Division of Gastroenterology and Hepatology and still lives in Houston, staying in Galveston during the week.

J. Douglas Trapp, M.D., MD'61, HS'61-'66, retired recently from practice as well as from giving talks around the country and world on erectile dysfunction, its significance as a health marker and its treatments with oral PDE5 inhibitors, notably Viagra, Levitra and Cialis. Trapp reports that he has recently developed Parkinson's disease, but is doing well, and he and Mercer hope to be back in Nashville for their 45th class reunion.

***Jim Warson, M.D., MD'66**, HS'66-'68, '70-'74, retired in 1998 but is busy in Hawaii writing a book on back pain in equestrians. The book is due to be published

Lojek logs thousands of miles on a character-building bike riding mission

worthy of note

***Michael Lojek, M.D., MD'76**, HS'76-'79, is a member of a 34-cardiologist practice, West Michigan Heart, in Grand Rapids, Mich., serving Grand Rapids, Holland, Greenville and much of West Michigan. He recently took a thousand-mile bike ride from Grand Rapids to Bath, Maine, where his son, Andrei, was attending the Hyde School. Parents of seniors at the school are expected to participate in a significant project that challenges or develops some aspect of their own character, since the school emphasizes if you teach high school students (and their parents) character, nothing else matters. Lojek's challenge was to take the risk of doing something he had never done before, and something that he might not be able to accomplish. In October 2004, he bicycled from Grand Rapids to Schenectady, N.Y., over small and back roads, a total of about 748 miles over nine days. In April 2005, he went back to Schenectady and bicycled from there to Bath through the mountains of Vermont and New Hampshire, and the hills of Maine – about 300 miles. His wife cycled with him about 500 miles of the trip. This year, inspired by the ride, they are organizing a five-part ride from New Brunswick, Canada to Key West, Fla., a trek of about 3,000 miles. They intend to go about 600 miles per leg in 60-mile daily segments of 10 days each. The first leg will be through New England into New York and Pennsylvania in May. The second leg will be in October, the third in April 2007, the fourth in November 2007 and the fifth and final leg going into Key West in February 2008. He is calling it the Ride de Hyde, in honor of the school, which he says has made a difference in his family's life.



***Kenneth S. Babe Jr., M.D., MD'91, HS'94-'96, CF '97- present**, has a private practice in allergy/immunology in Gallatin, Tenn., and Lebanon, Tenn., and works part-time at the Vanderbilt Allergy Center. He and his wife, MaryGlyn, have two sons, Kenneth, 2, and Thomas Ross, born last July.



Greg Den Haese, M.D., Ph.D., MD'01, completed his residency at the University of Washington and is working with four other doctors and two nurse practitioners in the Tampa Bay area. He has two children, Jessica, 6, and Cooper, 2, shown here with his dad.

sometime in 2007. He reports after a lifetime in neurosurgery and the horse business, he finally found a way to combine them in a useful manner.

70s

Kathleen Fischer, M.D., MD'79, HS'79, '82-'85, retired as captain from the Navy in San Diego after 22 years of active service. Practicing as an internist and a preventive medicine specialist, she recently worked on the Navy-wide preventive health and disease management initiatives. She is married to former classmate, **Joel Lees, M.D., MD'79, HS'79, '82-'85**, and they have four children, the oldest of whom, Toby, is a third-year medical student at the Uniformed Services University of Health Sciences in Bethesda, Md. She plans to continue her study of art history and will likely work as a medical director for the military's managed care contractor in the West.

David E. Fleischer, M.D., MD'70, is chair of gastroenterology and hepatology at Mayo Clinic, Arizona in Scottsdale. In March, he delivered the John E. Chapman lecture at Vanderbilt. In his spare time, he collects hats and has more than 500. His first hat party was held in Nashville in 1970 and there have been 22 subsequent hat parties in Cleveland, Los Angeles, Washington, D.C. and New Zealand.

***Chris Hawk, M.D., MD'71**, is still practicing general surgery and surgical oncology. His wife, Fran, plans to retire as school librarian next year and devote full time to writing children's books and being a grandmother to their first grandchild who arrived in January. Their daughter, Anne, is a dermatology resident; son James finishes medical school this year and his twin brother, John, finishes law school. Both are getting married this spring. Another son, Robert, will be in law school another two years.

***A. Everette James Jr., M.D., FA'75-'00**, former chair of Radiology and Radiological Sciences, was inducted by the governor of North Carolina into the Order of Long Leaf Pine, North Carolina's highest honor for service.

***K. Bruce Jones, M.D., MD'79**, was appointed to serve as a member of the Arkansas Committee on Applicants of the American College of Surgeons and has been appointed by the American Board of Surgery to serve as a consultant to the recertification committee in the development of the recertification exam. Jones serves as a regional representative of the VMAA Board.

***Edson O. (Skip) Parker, M.D., MD'78**, and his wife, Susan, did hurricane disaster relief work last fall with the Salvation Army in south Louisiana, working with

worthy of note

Cardiac examination skills do not appear to differ among third-year medical students, resident physicians, faculty members or private practitioners, and in fact, may decline after years in practice, according to a March study published in the *Archives of Internal Medicine*. Jasminka M. Vukanovic-Criley, M.D., HS'95-'99, of Stanford University School of Medicine, was the lead author of the study. The finding suggests that better cardiac exam training is necessary not only for medical students, but for the faculty members who teach them, Vukanovic-Criley said.

"Cardiac examination skills do not improve after the third year of medical school and may decline after years in practice, which has important implications for medical decision making, patient safety, cost-effective care and continuing medical education," the authors reported in the March 27 issue. The study involved 860 participants including medical students, family medicine and internal medicine residents, cardiology fellows and internists.



James Edwards, M.D., MD'81, has been chief of Surgery of the Portland, Ore., VA Hospital since 2001 and will be on sabbatical in Sydney, Australia, through May, and in London, England, in June 2006. He's shown here (back right) with his wife at a friend's wedding in Kashmir, India, in 2004.



James Mathewson, M.D., MD'71, is currently working with the Radiology Department at Children's Hospital San Diego to develop pediatric cardiac applications for multi-slice (64) CT. His most recent publication was in the *Journal of the American Society of Echocardiography* in January.



Carmel Colgrove Lakhani, M.D., MD'01, and **Vipul Tulsi Lakhani, M.D., MD'01,** welcomed Kavi Maxwell Lakhani on Aug. 23, 2005.



Mark Perkins, M.D., HS'84-'88, FE'90-'92, (shown here with his three children) co-founded the Foundation for Innovative New Diagnostics (FIND) and is the principal investigator for a new project to develop new diagnostic methods for human African trypanosomiasis (sleeping sickness), which has recently been awarded \$10 million from the Bill and Melinda Gates Foundation. FIND, a non-profit foundation located in Geneva, was launched in 2003 at the World Health Assembly with a \$30 million initial grant from the Gates Foundation toward the development of new tuberculosis diagnostics.

the canteens (mobile kitchens) that provided 15,000 to 20,000 meals per day at 16 sites to feed hurricane victims and also providing some on-the-spot medical treatment.

J. Rush Pierce, M.D., HS'77-'81, and his wife, Diana, have three children in medical school, at UCSF, Texas A & M and UT Southwestern. Their fourth child is a junior at Trinity University in San Antonio. He is on the internal medicine faculty at Texas Tech University Health Sciences Center and also serves as the local public health authority. Rush supervised the medical triage for local shelters during the Hurricane Katrina and Rita evacuations and also facilitated direct transfers from St. Elizabeth Hospital in Beaumont through his work with the Health Department and Emergency Management. Diane is running the computer lab at a local elementary school.

J. Robert Polk, M.D., MD'76, HS'76-'79, is vice president of Physician and Clinical Services at Saint Alphonsus Regional Medical Center in Boise, Idaho.

Adam Rosenberg, M.D., MD'76, is professor of Pediatrics at the University of Colorado School of Medicine, director of nursery services at the University of Colorado Hospital, and program director for the Pediatric Residency Program at the University of Colorado.

Hisahiko Sekihara, M.D., FE'75-'78, retired from Yokohama City University School of Medicine and now works with the Japan Labour Health and Welfare Organization which belongs to Japanese government.

Daniel K. Winstead, M.D., MD'70, was recently selected as president of the American Board of Psychiatry and Neurology for the 2006 calendar year. He is currently in his seventh year of an eight-year term with them. He was also elected to serve as a director of the American Board of Family Medicine with a 2005-2010 term of office. He continues to chair the Department of Psychiatry and Neurology and is the Robert G. Heath Professor of Psychiatry at Tulane University School of Medicine.

80s

Richard T. (Rick) Adamson, M.D., MD'80, is assistant clinical professor of Psychiatry at the University of Washington Department of Psychiatry and Behavioral Sciences. He has been in private practice in Seattle for 20 years with teaching activities as director of the Madison Park Resident Clinic and supervisor of advanced outpatient therapies with senior residents from the university. His wife, Linda, works in the Capital Projects Office on campus and has a jewelry design and metalsmithing studio. They have two sons, Walker and Riley.

John Barnard, M.D., HS'80-'84, FE'84-'86, has been named president of the Columbus Children's Research Institute (CCRI) at Columbus Children's Hospital. He has been serving as interim president since January 2005 and is a professor in the Department of

Pediatrics at The Ohio State University College of Medicine and Public Health. Barnard also serves as director of the Center for Cell and Vascular Biology at CCRI and is a practicing gastroenterologist. Barnard was formerly director of the Division of Pediatric Gastroenterology and Nutrition at Vanderbilt in 1995 and came to CCRI in 2000 as vice-president for Scientific Affairs.

Robert L. Barrack, M.D., MD'80, has left Tulane University for a faculty position in orthopaedic surgery at Washington University School of Medicine and Barnes-Jewish Hospital. He is a specialist in adult reconstructive surgery and joins the faculty as the Charles F. and Joanne Knight Distinguished Professor of Orthopaedic Surgery and will also serve as chief of staff for Orthopaedic Surgery at Barnes-Jewish Hospital and chief of the adult reconstructive surgery service for the Department of Orthopaedic Surgery.

Christopher Cates, M.D., HS'82-'85, FE'86-'89, director of Vascular Intervention at both Emory University Hospital and Emory Crawford Long Hospital, has been elected to the board of directors of the Society of Medical Simulation. He has also been appointed to the editorial board of the journal of SMS, *Simulation in Healthcare*, a quarterly journal, which includes original manuscripts, case studies and brief reports, systemic reviews and commentary. Cates and a colleague have designed one of the first virtual reality programs to train physicians in carotid stenting and he has been appointed to the executive committee of the International Andreas Gruntzig Society, an organization named after the late Swiss cardiologist, Andreas Gruntzig, who invented the coronary angioplasty procedure. The membership consists of only 150 cardiologists worldwide.

W. Winn Chatham, M.D., MD'80, is celebrating 20 years in the Division of Clinical Immunology and Rheumatology at the

University of Alabama at Birmingham, where directs Rheumatology Clinical Services and the UAB Training Program in Rheumatology. A recipient of a Clinician Scholar Educator Award from the American College of Rheumatology, he and his wife, Ashlee, recently welcomed their fifth child, Evalyn Claire.

***Ted Eastburn, M.D., MD'80, FE'87-'89,** is living in Colorado Springs, Colo., as a senior partner in the 12-member Pikes Peak Cardiology group, the largest Cardiology practice in Colorado Springs. He says he is trying to create "Vanderbilt West" with two other Vanderbilt cardiology training graduates as partners – **David Rosenbaum, M.D., HS'97-'99, FE'99-'00** and **Chris Kim, M.D., FE'98-'00.** The group is full-service, although Eastburn's particular focus is still on heart failure, including device implantation. He is married to Deborah Mahan and has five children. He reports he is healthy and happy and still rides his bicycle, takes photos, and has served on the Colorado Springs City Council. losing a bid for mayor in 2003. He continues a modest involvement in community affairs.

Neil G. Feinglass, M.D., MD'83, has worked for the Mayo Clinic for the past 19 years – two years in Rochester, Minn., and 17 years at Mayo Clinic Jacksonville. His position is chief cardiac anesthesiologist and leads the Surgical Automation Mayo Clinic. He and his wife have four children.

Andrew J. Friedman, M.D., MD'80, left academics (Brigham and Women's Hospital, where he was chief of the Division of Reproductive Endocrinology and Infertility and director of the REI fellowship program) in 1995 and joined a private practice in a community hospital north of Boston until 1998. After that he joined Ortho-McNeil, one of the Johnson & Johnson companies, as director of Women's Health Research, and after five years at Ortho-McNeil, he moved to Johnson & Johnson Pharmaceutical Research and Development as

senior director of Women's Health Research doing drug development. He lives in Princeton, N.J.

James F. Graumlich, M.D., MD'81, received the Faculty of the Year Award from his peers at the University of Illinois College of Medicine. He is principal investigator of a \$1.26 million federal grant to study health information technology along with co-investigator **G. Stephen Nace, M.D., MD'80, HS'80-'83, F'83-'86.** Graumlich was appointed to the governing board of the Illinois Foundation for Quality Health Care (Medicare Quality Improvement Organization). He and his wife and two sons reside in Peoria.

Lee W. Jordan, M.D., MD'81, retired from the Army in 2002 as a colonel after serving as the Cardiology Program Director at Walter Reed Army Medical Center and Bethesda Naval Medical Center.

***Deborah Lightner, M.D., MD'80,** is associate professor of Urology at Mayo Clinic in Rochester, Minn., and is currently serving as president of the 1,800-strong staff. She also serves in other administrative functions, including the institutional CPC, the operations coordinating group (allocation of all FTEs in research, education and clinical practice). In addition she has a surgical practice in female pelvic floor reconstructive surgery and neurourology. She and her husband, who directs a biomedical device company, have two daughters heading to Smith College as freshmen.

***Matt Lovitt, M.D., MD'86,** is one of two founding partners of a six-physician group of general/trauma surgeons at Baylor University Medical Center, a Level 1 Trauma Center, serving Dallas and a large part of the north Texas region. The group does trauma surgery, urgent general surgery and surgical critical care. He is married to Alexandra Dresel, M.D., a general surgeon at Presbyterian Hospital in Dallas, and they have a daughter, Elliot. He also has three older



Todd Huber, M.D., MD'99, and his wife, Tysha, and big brother, **William, 2,** welcomed **Henry Stephens Huber, born Aug. 10, 2005.** Huber, on the faculty in the Department of Otolaryngology at Vanderbilt, is working at Williamson Medical Center with the Vanderbilt Medical Group in Franklin, Tenn.



worthy of note

Alvin I. Mushlin, M.D., Sc.M., F.A.C.P., MD'66, is professor and chair of the Department of Public Health at Weill Medical College of Cornell University and Public Health Physician-in-Chief at New York-Presbyterian Hospital's Weill Cornell Medical Center. Since taking over the department in 1999, it has almost doubled in size. He was elected to the National Councils of the Society for General Internal Medicine and

the Society for Medical Decision Making, and has recently completed service as chair of the Health Care Quality and Clinical Effectiveness Study Section at the Agency for Health Care Policy and Research. Mushlin's research interests focus on the application of decision and cost-effectiveness analysis to the evaluation of clinical policies and medical technologies. He is the author of over 100 publications in the fields of primary care, clinical epidemiology and medical technology assessment, and has been a consultant to many national groups, including the Clinical Efficacy Assessment Project of the American College of Physicians, the National Blue Cross Association and the United States Preventive Health Services Task Force. His most recently published article, "The Value of Diagnostic Information to Patients with Chest Pain Suggestive of Coronary Artery Disease," appeared in the March-April 2005 issue of *Medical Decision Making*. Mushlin lives in New York City with his wife, Linda. They have two grown daughters.

worthy of note

New Orleans pathologist receives “Distinguished Patient Care Award” for service after Hurricane Katrina

In special recognition for his extraordinary care to patients in New Orleans immediately following Hurricane Katrina, the College of American Pathologists awarded Gregory S. Henderson, M.D., Ph.D., FCAP, PhD’92, MD’93, its first-ever “Distinguished Patient Care Award.”

Following Hurricane Katrina, Henderson, a pathologist at Ochsner Clinic Foundation in New Orleans, helped set up a clinic in the bar at the Ritz-Carlton Hotel and then at the Sheraton Hotel when the Ritz was evacuated, in an effort to provide critical medical services to patients who could not be rescued due to rising flood waters. He was staying at the Ritz-Carlton in New Orleans for an Ochsner staff leadership retreat when the storm began to head directly toward Louisiana.

Henderson sent an urgent request via e-mail from his hotel room shortly after the storm hit seeking supplies and assistance for patients, and cared for patients at the New Orleans Convention Center for several days. He was the only doctor on the scene during the initial period of the crisis.

“Dr. Henderson’s quick thinking and commitment to helping patients during this particularly devastating time was exemplary,” said Thomas M. Sodeman, M.D., FCAP, president of the College of American Pathologists. “This newly-created award recognizes this outstanding humanitarian service.”

“This is a deeply moving honor,” Henderson said in a press release issued by CAP. “Having been ‘on the ground’ during the entire Katrina crisis and aftermath, and having witnessed such amazing acts of courage and heroism from so many people, I am honored to be ‘singled out,’ but I am merely one of many, many people.”

Henderson said when the flooding started in New Orleans, at the Ritz-Carlton, “an overhead announcement directed anyone who needed medical care to the bar. I knew we were in for a medical crisis and that leaving was out of the question: real soldiers don’t run from fighting, and real doctors don’t run from sick people. I let them know that I was willing to help in any way I could.

“I’ve never witnessed anything in the United States to which I could compare the scene outside the New Orleans Convention Center....(but) we found that a physician in scrubs and a kind, but forceful, police officer were immediately welcomed into the crowd. The question was how to deal with all the people – by then, an estimated 15,000. As soon as I heard about one crisis, I would be grabbed for another; there was simply no way to logically triage it all.”

Henderson moved to New Orleans in August 2005 to take a position as director of Anatomic Pathology at Ochsner Foundation Hospital. Prior to that, he was a practicing pathologist at New Hanover Regional Medical Center in Wilmington, N.C.



Drug Development in San Antonio, Texas, performing clinical and preclinical research related to early-stage cancer drugs. In February 2005, he became senior vice president and chief medical officer of ImClone Systems, focused on the discovery and development of monoclonal antibodies and other anticancer therapeutics. He and his wife, Wendy, celebrated their 25th anniversary and have two “high energy” daughters, Anya and Gabriela, and two pugs, Big ‘Un and Little ‘Un.

***Lewis Schragger, M.D., MD’81,** wrote a play, “Levy’s Ghost,” his first, that was performed last year onboard the USS Constellation in Baltimore. Schragger, a physician working in the counterterrorism division of the U.S. Food and Drug Administration, wrote the play about the life of Uriah Phillips Levy, a 19th Century Jewish naval hero, who fought to abolish the practice of flogging in the U.S. Navy, and overcame religious persecution, ultimately achieving the rank of commodore. The play also focused on how Levy was responsible for the rescue and restoration of Thomas Jefferson’s Monticello.

Rhonda R. Voskuhl, M.D., MD’86, is professor in the UCLA Department of Neurology and director of the UCLA Multiple Sclerosis program. She has recently been chosen to receive the Skirball Chair in Neurology, an endowed chair. She and her husband, Allan Mackenzie-Graham, Ph.D., live in Westwood, Calif., with their 7-year-old daughter, Carmen.

90s

Lynne Berry, Ph.D., PhD’97, has written a children’s book, “Duck Skates,” published in the fall of 2005. You can read more about Berry at lynneberry.com

Peter Eby, M.D., MD’99, is now full time assistant professor of Radiology/Breast Imaging at the University of Washington and Seattle Cancer Care Alliance.



Gargi Gandhi, M.D., MD’01, and her husband, Ashish, had a baby boy on Sept. 21, 2005, Shaan Ashish Gandhi. They live in New York City.

children and the family likes to spend winter vacations skiing in Deer Valley, Utah, and summers in Newport Beach, Calif.

Neal Ready, M.D., MD’86, is moving to Chapel Hill, N.C., to practice medical oncology with a thoracic oncology group at Duke University Medical Center. His wife, Lynn Bowlby, M.D., will be the director for the internal medicine residents’ clinic for DUMC. They have two children, Ethan, 8, and Amanda, 4.

Eric Keith Rowinsky, M.D., MD’81, has moved to the biotechnology industry after spending nine years as director of Clinical Research and director of the Institute of

Javad Golzarian, M.D., FE'91-'92, received a patent based on the research he did with others at Vanderbilt during his fellowship. The patent was for using a magnetometer for non-invasive detection of ischemia in the intestine. He is one of four patent holders and was supervised by William Richards, M.D., professor of Surgery at VUMC.

R. Wayne Hatfield, M.D., HS '94-'01, is a urologist in private practice in Knoxville, Tenn., after spending three years in the Air Force in northern California. He and his wife, Linda, have two daughters.

Seenu Reddy, M.D., HS'95-'02, is the director of Emerging Technology, director of Thoracic Aortic Surgery and assistant professor in the Division of Cardiothoracic Surgery at the University of Texas San Antonio Health Science Center. Prior to his move to San Antonio, he served as a special fellow in the Division of Vascular Surgery at Emory University in Atlanta. He also was recently named to a national post as chair of the Residency Review Committee of the Accreditation Council for Graduate Medical Education and will hold a two-year term.

Patricia Revelo-Penafiel, M.D., HS '99-'04, finished a residency in anatomic pathology at Vanderbilt in 2004 and joined the faculty of the Department of Pathology and Laboratory Medicine at the University of Cincinnati in June 2004 as assistant professor. She has responsibilities on the Surgical Pathology, Cardiac and Renal Pathology Services. Last June, she also assumed the position of director of the Autopsy Service. She is involved in both research and residency teaching and conferences.

Elizabeth (Betsy) Stephens, M.D., MD'94, moved to Oregon for her residency and married Peter Mortola in 2003. Their son, Noah James, was born in June 2005. She is currently associate director of the Diabetes Center at Oregon Health and Science University in Portland.



Kathleen Crews Williams, M.D., MD'93, married Brad Williams, M.D., HS'81-'85, in 2000. They have two sons, Matthew, 3, and Nathan, 1. She is an endocrine surgeon at Baptist Hospital in Nashville, specializing in thyroid and parathyroid surgery. She was recently inducted into the American Association of Endocrine Surgeons, a group of mostly academic surgeons who specialize in endocrine surgery and drive the field both in literature and in clinical practice. She trained at Baylor University Medical Center and the Mayo Clinic.

2000-

Ishrat Ansari, M.D., FE '00-'01, is currently working at the Murfreesboro Veteran's Hospital in charge of nursing homes and the hospice unit.

Marc DeJong, M.D., MD'01, HS'01-'04, completed a sports medicine fellowship at Duke University, has settled in Belleville, Ill., a suburb of St. Louis, and has opened a solo practice, Southern Illinois Sports Medicine.

Truitt Ellis, M.D., MD'00, is assistant professor of Anesthesiology at the University of Alabama Birmingham School of Medicine in the Cardiac Anesthesiology Division.

Robert Garza, M.D., MD'01, HS'01-'02, is starting a plastic surgery residency in July at the University of Alabama at Birmingham. He and his wife, Beth, welcomed their first baby in February.



Adam Myhre, M.D., MD'00, and **Melissa Chen, M.D.,** MD'00, welcomed their first son, Evan Cedar Myhre, on Nov. 11, 2005. Adam is finishing a musculoskeletal radiology fellowship at the University of Washington and Melissa is a hospitalist outside Seattle. They are planning a summer move to Chicago to be near family.



Robin Hickman Fogle, M.D., MD'00, and Evander F. Fogle, M.D., MD'98, live in Los Angeles where she is halfway through her fellowship in Reproductive Endocrinology and Infertility. Evander is working at Camp Pendleton as a military orthopaedic surgeon and is commuting home on weekends. They have a 17-month-old son, Fletcher.

Neil Harris, M.D., MD'01, HS'01-'05, and his wife, Brenda Rochalle Harris, M.D., MD'03, have moved to Tucson, Ariz., where Neil is working in the Emergency Department at Northwest Medical Center. They have a son, Zachary, and are expecting their second child in June, another boy.

Varsha Khatri Humble, M.D., MD'00, is the newest pediatrician in Russellville, Ky. She and her husband, Brian Humble, M.D., MD'00, moved there in September.

Carla Lee, M.D., MD'01, HS'01-'05, will complete a pediatric dermatology fellowship in San Diego in June and hopes to return to Vanderbilt. She has one daughter, Nora Lee, 8, and has been married 12 years.

***Kelly L. Moore, M.D., M.P.H., MD'00, works for the Tennessee Department of Health as the medical director of the state immunization program and currently is coordinating the state's public health preparedness plans for pandemic influenza. She recently was appointed assistant clinical professor of Preventive Medicine at VUMC.**

Meeta Prasad, M.D., MD'01, HS'01-'05, completed training in internal medicine in July 2005 and is currently doing a chief residency at Yale-New Haven Hospital. She plans to continue her training in pulmonary-critical care medicine at the University of Pennsylvania in July.

Hunt heads new initiative at Massachusetts General

worthy of note

Dan Hunt, M.D., MD'81, HS'81-'83, has moved from Baylor College of Medicine to the Massachusetts General Hospital where he is director of a new initiative within the Department of Medicine – the Inpatient Clinician Educator Service. Each member of the group will attend on the inpatient house staff teaching services for at least eight months a year.

Their teaching services include the Bigelow Service, which is a typical teaching service caring for inpatient ward patients. "Our focus on this service is bedside teaching and supervision of care by a very, very capable and enthusiastic group of house staff," he says. They also attend on the Ellison Service, which is somewhat similar to the old Saint Thomas Hospital private teaching services, Hunt said. "We serve as attending of record for a limited number of patients on this service and will play a significant role in teaching for medical students and Medicine house staff."

Hunt says they also staff the Medicine Consult Service, which is run by four senior residents. "As you might imagine at a place like the MGH or Vanderbilt, this is a challenging teaching service with accomplished residents and difficult medical cases. Each member of our group is expected to develop and maintain a clinical area of expertise in addition to exploring innovative teaching techniques."

Hunt says another founding member of the Service is Kris Olson, M.D., MD'98, who is developing expertise in global health.

Hunt was a full-time faculty member at Baylor for a decade, where he won more than 35 major teaching awards. Prior to that he was in private practice in Houston for 11 years. "It was tough to leave that, but the pull of the MGH and the opportunity to help create a dedicated clinical teaching unit was too great to turn down."

Rachel Jankolovits Gordon, M.D., M.P.H., MD'00, married Timothy Gordon in June 2004 and obtained her master's degree in epidemiology at Columbia University's Mailman School of Public Health. They are living in New York City while she finishes an infectious disease fellowship at New York-Columbia Presbyterian Hospital. Her most recent publication was a Current Concepts article, "Bacterial Infections in Drug Users" that was published in the *New England Journal of Medicine* on Nov. 3, 2005.



Kathryn Teng, M.D., MD'97, HS'97-'99, her husband, Derek Abbott, M.D., Ph.D.'98, MD'00, and daughter, Annabelle, 3, welcomed Nathaniel Li Abbott, born April 13, 2005.

Richard Caprioli, Ph.D., Stanley Cohen Professor of Biochemistry, has been selected by The American Chemical Society to receive the 2006 Frank H. Field and Joe L. Franklin Award for Outstanding Achievement in Mass Spectrometry. The award, which recognizes outstanding achievement in the development or application of mass spectrometry, was presented at the annual meeting in Atlanta in March. Caprioli, director of the Vanderbilt Mass Spectrometry Research Center, has played a key role in the development of new mass spectrometry techniques in the fields of biochemistry and medicine, including the use of mass spectrometry to image biological molecules in tissue.

James Crowe Jr., M.D., professor of Pediatrics at the Monroe Carell Jr. Children's Hospital at Vanderbilt, has won the 2006 Mead-Johnson Award for Research in Pediatrics. Each year this national award, given since 1939, honors two individuals for their clinical and laboratory research achievements in pediatrics. Crowe is the first Vanderbilt researcher to be honored. Roger Dmochowski, M.D., professor of Urologic Surgery, has been named president of the Society of Urodynamics and Female Urology (SUFU). The appointment to the two-year term was made during the society's annual meeting in February.

Michael Engel, M.D., Ph.D., has received a 2006 Young Investigator Award from the American Society of Pediatric Hematology/Oncology (ASPHO). Engel, a fellow in Pediatric Hematology/Oncology at the Monroe Carell Jr. Children's Hospital at Vanderbilt, was one of two recipients of the national award, which recognizes excellence in basic science research related to cancer pathogenesis.

Andrew Gregory, M.D., assistant professor of Orthopaedics & Pediatrics, has been selected as an official team physician for the U.S. Volleyball Association's national teams. For the past five years, he has been a volunteer for the association's Medical Resource Advisory Team. In November, Gregory traveled to Japan with the men's national team. Only the best teams from Europe, Asia, Africa, North America and South America competed. The men's national team, ranked fifth in the world, received a silver medal in the Federation Internationale de Volleyball Grand Champion's Cup. In July, Gregory will travel with the men's team to the World League competition in Europe. The team will face off against Poland and Serbia/Montenegro. If the team continues its winning streak, it could compete in the 2008 Olympics in Beijing, China. If that happens, Gregory

says he'll be the first to sign up to travel with the team.

David Gregory, M.D., associate professor of Medicine, is the 2006 recipient of the American College of Physicians' Oscar E. Edwards Memorial Award for Volunteerism and Community Service, presented in April at the ACP Annual Session in Philadelphia. The award was established in 1998 by the ACP Board of Regents to honor the late Edwards, a governor and regent of the College. It is presented annually to a college medical student member, associate, member, fellow, or master who has initiated or been involved in volunteer programs or provided volunteer service post-training. Gregory was nominated for his vision and dedication in establishing the Siloam Clinic, a faith-based, volunteer-driven, health care clinic that cares for the uninsured, underinsured and those who have difficulty accessing health care due to language barriers.

***Pat Levitt, Ph.D.**, Vanderbilt Kennedy Center Director, has been appointed to the National Advisory Mental Health Council by U.S. Health and Human Services Secretary Mike Leavitt. The council advises the HHS secretary, the

assistant secretary for health, the director of the National Institutes of Health and the director of the National Institute of Mental Health on all policies and activities relating to the conduct and support of mental health research, research training and other programs of the NIMH. Levitt will serve a four-year term.

***Lawrence Marnett, Ph.D.**, director of the A.B. Hancock Jr. Memorial Laboratory for Cancer Research, has been working as chair of the Chemistry in Cancer Research group for the American Association of Cancer Research (AACR). Marnett began his role leading the newly created working group to bring more focus on chemistry within the AACR. He and other colleagues have teamed up with representatives from leading pharmaceutical companies to highlight the importance of the work of chemists.

***Lynn Matrisian, Ph.D.**, professor and chair of Cancer Biology, is co-chairing the National Cancer Institute's Translational Research Working Group, as researchers and scientists from many organizations come together to evaluate the NCI's investment in research that moves laboratory discoveries to clinical trials involving cancer patients. Matrisian, an

Grossman's influence felt citywide

*Laurence A. Grossman, M.D., clinical professor of Medicine in the Vanderbilt University School of Medicine since 1966, died March 1.

Dr. Grossman, 89, MD'41, HS'41, an internal medicine and cardiovascular disease specialist, was the first physician in Nashville to fully integrate his medical practice and his staff.

An alumnus of both Vanderbilt University and VUSM, he held teaching appointments at Meharry Medical College and Vanderbilt and also helped establish Saint Thomas Health Services.

While serving as president of the Nashville Academy of Medicine in 1961, he led the movement to integrate the association, making Nashville one of the first cities in the South to have an integrated medical academy.

Dr. Grossman helped establish the Middle Tennessee Heart Association and was named president on both the local and state levels of the Tennessee Medical Association.

In addition to serving as past president of the Canby Robinson Society and the Vanderbilt Medical Alumni Association, he was a member of the Vanderbilt Medical Center Board.

It was his time serving in the U.S. Army that reinforced the attitudes that would help Dr. Grossman shape the future of race relations in Nashville.

"I spent many years in the armed forces in World War II with black soldiers, and I said to myself, 'If the Lord was good enough to let me come back to my wife and children, there would be no segregated citizens in my life,'" Dr. Grossman said in 1982 after receiving the National Conference of Christians and Jews award for promoting human relations in the community.

His list of humanitarian awards includes the Distinguished Human Rights Service Award in 1987 and the Salt Wagon Award in 2000, deemed Meharry's most prestigious honor.

In addition to his wife, Dr. Grossman is survived by four daughters and four grandchildren.

- JESSICA PASLEY



Ingram Distinguished Professor of Cancer Research, said the group is trying to envision a better system, focusing on speeding the development of new diagnostic tests, treatments and other innovative discoveries that target people with cancer and those at high risk for cancer. Vanderbilt-Ingram Cancer Center is well represented in Working Group discussions. **Raymond DuBois, M.D., Ph.D.**, director of Vanderbilt-Ingram, also serves on the core committee.

Kevin D. Niswender, M.D., Ph.D., PhD'96, MD'98, is one of three young physician-scientists in the country to be named a 2006 Charles E. Culpeper Medical Scholar. The scholarship program was established in 1988 to "nurture the career development of exceptionally promising physician scientists as they transition to becoming independent researchers at the best academic medical centers," according to Partnership for Cures, the public charity that currently administers the program. Niswender was selected from a pool of 34 applicants nominated by academic medical centers across the country.

John Pope, M.D., HS'89-'95, associate professor of Urologic Surgery at the Monroe Carell Jr. Children's Hospital at Vanderbilt, has received a \$1.2 million grant from the National Institutes of Health to investigate ways to make a surgery he regularly performs, obsolete. The surgery is used to correct bladder fibrosis, a common side effect of the birth defect spina bifida, which occurs in about one in 1,000 births in this country.

***John Sergent, M.D., MD'66, HS'59-'60, '70-'72**, stepped down as Vanderbilt University Medical Center's first chief medical officer in 2003 and succeeded John Leonard, M.D., as the residency program director for the Department of Medicine. Sergent reports that despite the Residency Review Commission and the duty hours issues, he loves the job and especially the residents who are "incredibly smart and hard working." He and his wife, Carole, have two grown daughters – Katie, who lives in Nashville and Ellen, who lives in London. Each has two children.

Saba Sile, M.D., instructor in the Division of

Genetic Medicine, was recently awarded a grant from the Harold Amos Medical Faculty Development Program. This ongoing program administered by the Robert Wood Johnson Foundation aids in the career development of faculty from historically disadvantaged backgrounds. The four-year research award is offered to physicians who are committed to excellence in biomedical research, clinical investigation or health services research, and who are interested in improving the health of underserved populations and furthering the understanding and elimination of health disparities. Under the guidance of mentors ***Alfred L. George, M.D., HS'82-'85**, director of Genetic Medicine, and **Nancy J. Brown, M.D., MD'86, HS'86-'89, FE'89-'91**, professor of Clinical Pharmacology, Sile is investigating the genetic underpinnings of high blood pressure, a disease that affects minority populations at a staggering rate.

***Anderson Spickard III, M.D., MD'89**, assistant professor of Medicine, was chosen by students for a recent CANDLE (Caring, Advocating, Nurturing, Determination, Leadership and Empathy) Award. The honor is given to individuals who have devoted themselves to teaching and mentoring. Recipients are nominated and chosen based upon their positive impact on the lives of physicians-in-training, and are recognized by their students as examples of excellence in medical education.

***W. Anderson Spickard Jr., M.D., MD'57, HS'57-'59, '62-'63, CF'66-'70, FA'70-**, and his co-author Barbara Thompson just published the new version of their book "Dying for a Drink – What You and Your Family Should Know About Alcoholism." The first edition was published in 1985 and has been translated into six languages. Spickard is the director of the Center for Professional Health at Vanderbilt that deals with physicians with boundary problems.

Elizabeth Williams, Ph.D., former director of Disparity Elimination for the Tennessee Department of Health and Human Services, has been named Vanderbilt-Ingram Cancer Center's associate director for Minority Affairs. In her new role, Williams will work with physicians and scientists at Vanderbilt-Ingram, as well as community leaders and minority populations to decrease overall cancer-related health disparities. Her position will focus on health promotion, education, access to care, clinical trials and behavioral interventions for minority populations.

Hazinski remembered for humanity, humility

***Thomas Hazinski, M.D.**, will be remembered for many things in life, but two above all others – a thriving career at Vanderbilt University Medical Center that embraced patients, doctors, researchers, nurses and staff, and his devotion to his family.



Dr. Hazinski, who built Vanderbilt's Division of Pediatric Pulmonary Medicine from scratch and for the last two years served as associate dean for Faculty Affairs, died in January from sudden cardiac arrest at his home. He was 57. He is survived by his wife of 30 years, Mary Fran Hazinski, R.N., M.S.N., a clinical nurse specialist in pediatric emergency and critical care at the Monroe Carell Jr. Children's Hospital at Vanderbilt, a son, Michael, 24, and other family members.

Dr. Hazinski, professor of Pediatrics, was a native of South Bend, Ind. He received his undergraduate degree from the University of Notre Dame in 1971 and his medical degree from St. Louis University in 1975. He joined the Vanderbilt faculty in 1984.

His career at Vanderbilt was multi-faceted. In addition to directing the Division of Pediatric Pulmonary Medicine, he and Nancy Brown, M.D., Robert H. Williams Professor of Medicine, began Vanderbilt's Master of Science in Clinical Investigation program.

He belonged to a number of professional organizations including The Society of Pediatric Research, of which he was past president, American Pediatric Society, American Physiological Society and the Perinatal Research Society. He was included in the "Best Doctors in America" publication beginning in 1998.

In 2004, Dr. Hazinski stepped into the role of associate dean for Faculty Affairs, a newly created position, where he monitored issues relating to faculty promotion and tenure and conflict of interest, helped identify and eliminate obstacles to faculty productivity and helped ensure that faculty understand academic guidelines.

He divided his time evenly – half in his new role and the other half among his other academic duties.

To honor Dr. Hazinski, the Medical School has named the annual faculty development symposium, the Thomas Hazinski, M.D., Symposium and each year's keynote speaker will be the Hazinski lecturer.

– NANCY HUMPHREY

Charles Carlisle Brock Jr., M.D., MD'52, of Blytheville, Ark., died in August 2005 in Memphis, Tenn.

Stanley K. Brockman, M.D., HS' 59-'63, died in December 2005 in Wynnewood, Pa. He was 77. Dr. Brockman was a pioneering heart surgeon and retired chairman of the cardiothoracic surgery and research departments of Hahnemann University. He began Hahnemann's cardiothoracic intensive care unit and established its heart-lung and heart transplant programs. Prior to his work at Hahnemann he directed the cardiothoracic surgery division at Thomas Jefferson University Hospital. He retired in 1998. Hahnemann endowed the Stanley K. Brockman Chair of Cardiothoracic Surgery in his honor. He is survived by his wife, Yvonne, daughter, Karen, sons, Eric and Douglas and six grandchildren.

David A. Chadwick, M.D., CF'78-'89, died on Nov. 11, 2005, in Chattanooga, Tenn. He was on the Anesthesiology faculty while at Vanderbilt. He is survived by his wife, Sybil, children, Jacqueline, Nigel and Deborah, and four grandchildren.

Herschel L. Copelan, M.D., MD'48, died Aug. 31, 2005, in Templeton, Calif.

***Marvin B. Corlette, M.D.**, MD'33, HS'35-'37, died Dec. 7, 2005, of cancer in Laguna Niguel, Calif. He was very active in the Laguna Niguel Rotary and Star Finders. His survivors include three children, six grandchildren and two great-grandchildren.

James Vance Fentress, M.D., MD'52, CF'75-'00, died in November 2005, in Murfreesboro, Tenn. He was 80. Believed to be the first practicing internist in Giles County, Tenn., he also was on the clinical faculty at Vanderbilt and set up a heart clinic at the Giles County Hospital. He served as former president of the Tennessee Society of Internal

Medicine and was a member of the American Medical Association, the Tennessee Medical Association, and the American College of Physicians. He is survived by his wife, Phyllis, two sons, James Jr. and Samuel, and eight grandchildren.

Ernest George Fermanis, M.D., MD'74, died Dec. 1, 2005. He was 61. He was a diplomate of the American Board of Urology National Board of Medical Examiners and had lived in Atlanta since 1982 where he was an associate clinical professor of Urology and a urologic surgeon at Crawford Long Hospital of Emory University. He is survived by his wife, Pauline, and daughters Nicole and Alexis.

Charles Patrick (Chuck) Fitzgerald, M.D., MD'80, HS' 80-'83, died Dec. 18, 2005, in Little Rock, Ark., where he had practiced cardiology since 1986. Fitzgerald is survived by his wife, Martha Elise, daughters Elise and Emily, and sons Drew and David.

Paul James Flakoll, Ph.D., FE'88-'89, FA'88-'02, died Dec. 17, 2005, in Aberdeen, S.D.. He was 48. He was a research reviewer for numerous organizations and publications including the National Institutes of Health and the American Journal of Physiology. He is survived by his wife, Candace, and sons, Michael and Andrew.

James R. Givens, M.D., FE'62-'64, died Dec. 13, 2005, from complications from Parkinson's disease. He was 75. Before he retired in 1989 he was head of the Section of Reproductive Medicine in the Division of Endocrinology and Metabolism at the University of Tennessee, Memphis. He lived in Sylvester, Ga., and his wife, Mary.

Edgar Gilmore Givhan II, M.D., HS'60-'66, died Nov. 15, 2004, after an 11-year battle with prostate cancer. He was 69. He was an internist and president of the

Robert Smith Sanders, M.D., MD'55, HS'55, '57, died Jan 19 at Vanderbilt University Hospital. He was 78. Sanders, a pediatrician in Murfreesboro, Tenn., was instrumental in the 1977 passage of the child restraint legislation in Tennessee, the first of its kind in the country. He moved into public health in 1966, became the Rutherford County Health Department's director and chief physician in 1969 and retired in 1991. He became medical examiner in 1983 and retired in 1999. Known as "Dr. Seat Belt," Dr. Sanders worked with Tennessee State Rep. John Bragg to get child restraint legislation passed. A Babes in Arm amendment was passed with the bill, which allowed drivers to hold their young children in their arms instead of restraining them in car seats or with seat belts. Sanders successfully lobbied to remove that amendment in 1981. "He was a strong advocate for the health and safety of the citizens of Rutherford County and of Tennessee," Glenn Chrisman, Murfreesboro Police Chief, told Murfreesboro's *Daily News Journal*. He is survived by his wife, Patricia, son, Robert Jr., and daughter, Priscilla.

medical staff of Montgomery Baptist Hospital in Montgomery, Ala., and was president of the Montgomery County Medical Society in the 1970s. He is survived by his wife, Margaret, six children, and 13 grandchildren.

Elisabeth K. Hoyt, M.D., HS'48, died Jan. 19 in Moscow, Pa. She was 94. She is survived by several nieces and nephews.

Douglas Jones Jr., M.D., HS'64, HS'67, died Dec. 11, 2005, in Mt. Pleasant, S.C. He was 67. He was owner and medical director of Metabolic Medical Centers in South Carolina, a member of the American Board of Endocrinology, of the Charleston County Medical Society and a member of the National Lipid Association and the Huguonot Society of South Carolina. He is survived by his wife, Barbara, three sons, F. Douglas, Scott and Todd, and five grandchildren.

Russell J. Love, M.D., FA'67-'89, CF '89-'00, died March 8 in Nashville. He had a dual appointment as chief speech pathologist at the Bill Wilkerson Hearing and Speech Center and as assistant professor at VUMC. He was the author of numerous professional articles, book chapters and a textbook widely used on childhood motor speech disability. He is survived by his wife

of 44 years, Barbara, sons, Steven and Gregory, and six grandchildren.

***Robert E. Merrill, M.D.**, MD'49-'55, died Jan. 11 at his home in Salado, Texas, due to complications of acute leukemia. He was 80. After Dr. Merrill completed his postgraduate training and fellowship appointments at Vanderbilt, he became an instructor in Pediatrics in 1957. He rose to associate professor of Pediatrics before leaving in 1966 to accept a position at the University of Virginia devoted to rehabilitation. He subsequently held appointments in several pediatric departments before accepting a position as associate editor of the *Journal of Pediatrics* in 1977. He is survived by three daughters, Susan, Nancy and Kathleen, a son, Forrest, and six grandchildren.

David Max Nierste, M.D., FE'90-'93, of Brentwood, Tenn., died on Jan. 27. He was 44. After completing his cardiology training in 1993 he pioneered a Vanderbilt satellite practice in Franklin, Tenn., from July 2001 until cancer forced his retirement in 2005. He was a partner in Mid State Cardiology and served as chair of Cardiology at Williamson Medical Center in Franklin, Tenn., where he initiated an angioplasty program, which the hospital dedicated in September 2005 as the Nierste

Cardiac Suite. He is survived by his wife, Lisa, and children, Jessica, Sarah and Nicholas.

Robert Murphy Reed, M.D., MD'54, HS'54-'59, died Dec. 19, 2005, in Nashville. He was 76. He is survived by five daughters, one son, and their families.

***Harrison H. Shoulders, M.D.,** MD'46, FE'55, died on Feb. 3 in Nashville. He was 82. He is survived by his wife, Elizabeth, four daughters, Beth, Susan, Carolyn and Anne, three stepchildren and six grandchildren. After serving as chief resident at Barnes Hospital of Washington University in St. Louis, he returned to Nashville as assistant professor of Surgery at Vanderbilt. He practiced surgery in Nashville from 1954 until 1967, when he co-founded the Shoulders-Taylor Clinic in Lewisburg, Tenn., and became one of the early practitioners of colonoscopies in Tennessee. In later years he practiced general medicine at Tracy Clinic in Tracy City and Southern Tennessee Medical Center in Winchester, Tenn.

Gerald L. Wolf, M.D., MD'56, died on March 2. During his career he held academic appointments at several institutions – assistant professor of Anesthesiology at Columbia University's College of Physicians and Surgeons; clinical associate professor at the College of Medicine and Dentistry of New Jersey; and associate professor of Clinical Anesthesiology at SUNY Stony Brook. He is survived by his wife, Audrey, three children, Marc, Ralph and Amy, and one grandchild.

Historical surgeon, mentor, friend Norman Shumway dies at 83

*Norman E. Shumway, M.D., Ph.D., the 1949 Vanderbilt University School of Medicine alumnus who performed the first human heart transplant in the United States, died of cancer on Feb. 10 at his home in Palo Alto, Calif. He was 83.

In December 1967, one month shy of his historic transplant, Dr. Shumway watched with the rest of the world as Christiaan Barnard, M.D., a South African heart surgeon, performed the world's first human heart transplant. As he looked at the news reports of Barnard's groundbreaking surgery, he only felt relief, Shumway said in a 1997 interview with *Vanderbilt Medicine*.

"It was an advantage, in a way, not having all the media attention focused on us," he said. "It just took off some of the pressure. At Stanford, we just kept going because we had the patience."

Dr. Shumway and his surgical team at Stanford performed the first transplant on Mike Kasperak, a 54-year-old Palo Alto steelworker, who died 14 days after the operation. But when some on the same path gave up, Shumway continued his research, helping to improve techniques and patient survival rates. Thirteen years later he performed the first heart-lung transplant. Today, heart transplants are performed more than 2,000 times a year in the United States – 2,016 in 2004 – and as of July 15, 2005, the one-year survival rate was 86.4 percent for males and 84.6 percent for females.

Dr. Shumway said in the *Vanderbilt Medicine* interview that the years leading up to the first human transplant were full of fun and excitement.

"In the original animal experiments, it was just unbelievable seeing a dog the next day after the transplant, up running around the laboratory trying to find food and looking just like every dog you ever had in your family," he said. "That was the real thrill. That's where we had the fun. At that time, it was just all so exceptional. It was unique."

Dr. Shumway, the son of a Kalamazoo, Mich., dairy farmer, planned to study law before World War II took him away from his studies at the University of Michigan. He never earned a bachelor's degree, but enlisted in the Army in 1943, and was given the choice of becoming a physician or a dentist. He chose medicine and enrolled at VUSM after completing a nine-month pre-med course at Baylor.

After leaving Vanderbilt, Dr. Shumway was a postdoctoral research fellow at the University of Minnesota, a trainee at the National Heart Institute, then left to join the faculty at Stanford, where he began his studies on cardiac transplantation in 1958. He remained there his entire career. He also pioneered a procedure for correcting birth defects through bypass surgery and developed techniques for total surgical correction of "blue baby" heart defects.

Dr. Shumway was recognized with many national and international awards, and received distinguished alumnus awards from both Vanderbilt University and VUSM. An annual lecture at the Vanderbilt Transplant Center is also named for Shumway in honor of his contributions to heart transplantation research and surgery.

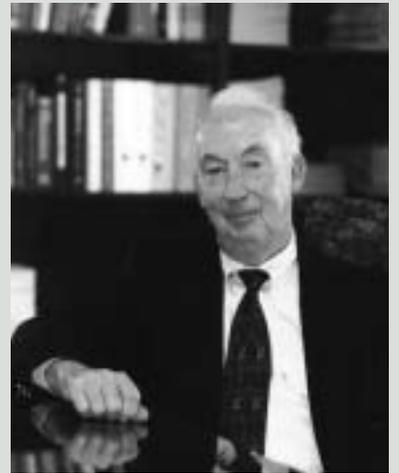
"Dr. Shumway is recognized as one of Vanderbilt's most distinguished alumni, receiving the first Vanderbilt Medical Alumni Association Distinguished Alumni Award in 1983," said Ann Price, M.D., executive director for Medical Alumni Affairs. "An innovative researcher, educator and clinician, he is remembered not only for his brilliant intellect but also for his tireless commitment to excellence, an excellence that would elevate and extend the lives of cardiac transplant patients well beyond the span of his years. His pioneering spirit will live on in those fortunate enough to have trained under his demanding tutelage."

U.S. Senate Majority Leader William H. Frist, who studied under Dr. Shumway at Stanford in the early 1980s, spoke about his mentor on the floor of the U.S. Senate. "I have worked with a lot of cardiac surgeons, heart surgeons in programs around the world, including Boston, Mass., over in England, out on the West Coast, down in the South at Vanderbilt, and, more than anybody I interacted with over the 20 years I have spent in medicine, Dr. Shumway was the one, was the single one, who had the broadest, as well as the deepest influence because of his unparalleled commitment to teaching.

"Having had the honor of working with him, he was the inspirational leader. He was the guiding light who seemed to be able to pull it all together with his vision and with his determination and his dedication. He has affected the lives of thousands and indeed hundreds of thousands of people through his teaching and through his training around the world. He was my mentor, he was a great surgeon and a true friend, and someone I will miss dearly."

He is survived by his ex-wife, a son, Michael and three daughters, Amy, Lisa and Sara, a 1979 graduate of VUSM and former Vanderbilt house officer, who directs the heart and lung transplantation program at the University of Minnesota, and two grandchildren.

– NANCY HUMPHREY





Match Day 2006 Photo Gallery

Photography by Dana Johnson

Pictured here:

1. Brian Gray, left, Sanmit Basu and Carol Senkler applaud during Match Day.
2. Robert Boykin had a sign for almost all occasions. This one came out for classmates who matched at Vanderbilt.
3. Claire Turchi, with Scott Rodgers, M.D., is all smiles about spending her residency in Emergency Medicine at Stanford University Programs.
4. Dean Steven Gabbe hugs Kate Celauro who matched in Ob/Gyn at University of North Carolina Hospitals in Chapel Hill, N.C.

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