



NEIL BRAKE

Riding high

Graduate Josh Nepute (above) gets a lift from classmates while lining up for Vanderbilt's 2008 Commencement. Erin Piker (below) adjusts her cap on Alumni Lawn.

For more photos, see pages 64-65.



NEIL BRAKE

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Edmund Monsiel
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:: on the cover

The cover drawing is by Edmund Monsiel, a Polish outsider artist who is believed to have suffered from schizophrenia. His exquisitely-detailed drawings, like this one, are obsessively repetitive, every inch of the page covered with the image of a face. About 500 drawings were discovered after his death in 1962.



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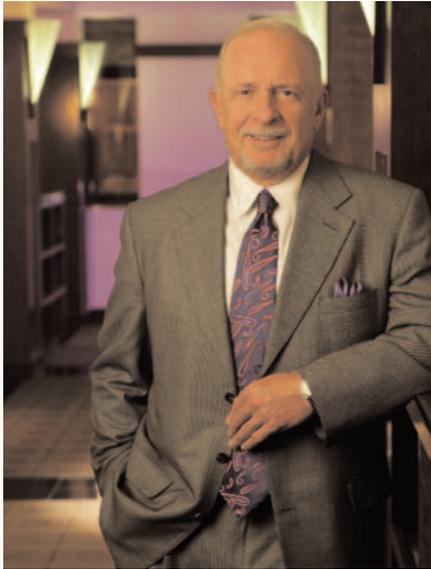
The search for genes and brain features linked to mental illness.



DECODING MENTAL ILLNESS 40

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

Our reality is made up of what we have learned,



our memories, our experiences, our physical selves and our neural networks. It changes over time, usually gradually, but even as it changes it is continuous and largely predictable. As we all know, our own reality is different from our wife's, from our children's and from our colleagues' and friends'.

But our realities, however they may differ at the margins, are reasonably consistent and shared. This reality that we co-construct with those around us is what allows us to function effectively, productively and socially.

But what happens when the reality we collectively and carefully develop fails, when our reality this moment is radically different than in the moment before, when our reality is wildly different than the people around us? This issue of *Vanderbilt Medicine* explores the implications of the altered realities that present clinically as mental illness – when the fragile platform of reality constructed in our brains is assaulted by the seismic shocks of vulnerable genetics, flawed brain chemistry and traumatic experience.

The new research armamentarium of the 21st century – advanced brain imaging technology, genetic profiling, gene expression technique, and rationale drug discovery – are offering novel avenues to diagnose, treat and even prevent mental illness. And we are learning more each day about the value of an old approach – psychotherapy – and how in combination with pharmacotherapy we can solve both

symptom and root cause. In this issue you'll learn more about who leads those efforts at Vanderbilt, what it means for the treatment of mental illness today, and what it may mean in the future.

Solving the ills of the mind is no trivial matter. The cost of lost productivity, of direct health care delivery and of drug utilization is enormous. In fact, mental illness is one of the most expensive segments of the health care economy.

At Vanderbilt, we are committed to taking care of those who struggle with mental illness. Our psychiatric hospital is a regional resource for the acute management of mental illness. Our outpatient clinics are among the busiest on campus, with more than 50,000 visits per year.

It takes an enlightened and collaborative approach to tackle the challenge of mental illness. We do not have parity of health care for medical and mental disorders. But mental illness is, ultimately, a disorder of the brain, amenable to scientific exploration and intervention, as much as cancer and heart disease.

The task is a daunting one, but the opportunity to change lives is stirring. **VM**

Vision 2020 outlined at annual address

The 2008 State of the Medical Center address unveiled more about the Medical Center's new "exercise" – Vision 2020.

Unveiled by Vice Chancellor for Health Affairs Harry Jacobson, M.D., a year ago, it aims to set as a collective goal "to make change, to make things better, to have a measurable impact" on the health of Middle Tennessee.

"Instead of wondering what we need to do to become one of the best medical centers in the nation," Jacobson said in his speech, "we will ask what can we do to make fundamental discoveries in science, to speed discovery so that it is incorporated into practice almost overnight, to care for patients in a failsafe way ... (and) to change the way medical and nursing school students learn."

During his hour-long address in the newly refurbished Langford Auditorium, Jacobson detailed the remarkable growth the Medical Center has achieved in the last few years, and the challenges it faces.

He also announced that effective Sept. 1, all tobacco use will be banned on campus. The ban will apply to staff, faculty, patients, vendors and visitors.

Smoking cessation classes and prescriptions will be offered to employees; visitors who smoke will be guided to off-campus sites, and they will be offered smoking cessation brochures and nicotine substitutes.

An estimated 1,000 people attended Jacobson's address, including members of the Medical Center Board and recently appointed Vanderbilt Chancellor Nicholas Zeppos.

In the preliminary planning stages is a new research building to be located alongside the "S" corridor of Medical Center North between the Vanderbilt University Institute of Imaging Science and the Eskin Biomedical Library.

To view Jacobson's address online, go to www.mc.vanderbilt.edu/stateumc. **VM**

-BILL SNYDER

News and happenings at Vanderbilt Medical Center

Grant bolsters 'fragile x' research

Vanderbilt Medical Center has received a \$4.5 million grant from Seaside Therapeutics to find potential treatments for fragile X syndrome, the most common inherited form of mental retardation and the most common genetic cause of autism.

"It's a really innovative idea," said Jeffrey Conn., Ph.D., director of the Vanderbilt Program in Drug Discovery and principal investigator of the fragile X project. "If it works, it could be transformative ... it could totally change the way people view developmental disorders."

Research conducted by founders of Seaside Therapeutics and others indicates that excessive signaling through a receptor for the neurotransmitter glutamate, called mGluR5, may be responsible for the neurological and psychiatric consequences of fragile X syndrome.

Selective inhibition of the receptor potentially could reduce or eliminate these devastating effects, company officials said.

That's where the Vanderbilt researchers come in.

They are internationally known for their discovery of "allosteric modulators," compounds that do not directly activate receptors in the same way as neurotransmitters, but instead work like the dimmer switch in an electrical circuit.

In the case of mGluR5, Conn and his colleagues have identified more than 400 "negative" allosteric modulators, compounds that selectively "turn down" the activation of the receptor when glutamate binds to it.

Supported by the three-year Seaside Therapeutics grant, the Vanderbilt researchers will use medicinal chemistry, molecular biology, pharmacology and efficacy studies to develop compounds with the drug-like properties required for further study in fragile X.

Seaside Therapeutics will contribute scientific and drug-development expertise, and will select compounds from the collaboration to carry forward into clinical development.

Conn's colleagues in this effort include Craig Lindsley, Ph.D., David Weaver, Ph.D., Alice Rodriguez, Ph.D., and Carrie Jones, Ph.D.

Fragile X syndrome is relatively rare, affecting approximately 90,000 people in the United States. It is caused by a mutation in the FMR1 gene on the X chromosome that prevents expression of a single protein, the fragile X mental retardation protein (FMRP).

The absence of FMRP gives rise to the major symptoms of fragile X syndrome in humans — impaired cognitive function, developmental delay, attention deficit and hyperactivity, anxiety, obsessive-compulsive and autistic behaviors. **VM**

-BILL SNYDER



Jeff Conn, Ph.D., front, center, with members of his research group: (front row, from left) Colleen Niswender, Ph.D., and Alice Rodriguez, Ph.D., (back row, from left) Craig Lindsley, Ph.D., David Weaver, Ph.D., and Carrie Jones, Ph.D.

NEIL BRAKE

Children's Hospital loses 'greatest supporter'

Community leader and philanthropist Monroe Carell Jr., whose generosity and passion for the health of children led to the building of one of the nation's top children's hospitals, died on June 20. He was 76.

Mr. Carell, along with his wife, Ann, was a staunch supporter and contributor to many areas at Vanderbilt and beyond, but is perhaps best known for the legacy he leaves as the namesake of the Monroe Carell Jr. Children's Hospital at Vanderbilt.

"Monroe will be forever known for his strong commitment and incredible generosity to his Children's Hospital and to the children and families it serves," said Harry R. Jacobson, M.D., vice chancellor for Health Affairs. "I could not be more grateful to him and his family for the tireless dedication and service to Vanderbilt throughout the years. He was a true leader, and I am proud to have called him a friend. His legacy will live on in the lives of the countless children he helped to improve through the hospital that bears his name."

A renowned businessman, Mr. Carell was the founder of Central Parking Corporation, the world's largest parking corporation, where he sat at the helm for more than four decades before its sale in 2007. He was a Nashville native who served in the Navy before enrolling in Vanderbilt's School of Engineering. He graduated in 1959, the first in his family to receive a college degree, and was named a distinguished alumnus of the school in 2001.

At the Children's Hospital, Mr. Carell served as an honorary lifetime member of the Board of Directors. He led the first two phases of the campaign to build the new, freestanding children's hospital, which opened in 2004.

"Monroe Carell Jr. means everything to this hospital. He was our champion and benefactor, greatest supporter and biggest fan," said Kevin B. Churchwell, M.D., chief executive officer of Children's Hospital. "His commitment, not only his financial support, has made this hospital the place to come for quality health care. He led by example and it's a true example of how we should live our lives as servant leaders."

As a child, Mr. Carell was hospitalized many times and has said his illness and subsequent recovery motivated him to help children's causes. His motivation also stems from his own good fortune of having three healthy grown daughters and his six grandchildren. His daughter, Julie Stadler, is following in her father's footsteps as she and her husband, George, are leading the effort to help raise funds for the future expansion of Children's Hospital.

Mr. Carell was deeply touched by all children in the hospital, but over the years, he became particularly drawn to the infants



Monroe Carell Jr.

NEIL BRAKE

being treated in the Neonatal Intensive Care Unit (NICU).

The Division of Pediatric Cardiology at Vanderbilt is another area in which Mr. Carell has left an imprint. In 1985, the family established an endowed chair, the Ann and Monroe Carell Family Chair of Pediatric Cardiology, first held by Thomas P. Graham, M.D., professor of Pediatrics, Emeritus. Thomas Doyle, M.D., professor of Pediatric Cardiology, is the second and current chair holder.

At Vanderbilt, Mr. Carell was chairman of the Shape the Future campaign, the largest campaign in Vanderbilt's history, and has served as a member of Vanderbilt's Board of Trust since 1991. He also served on the Vanderbilt Medical Center Board and on the Board of Overseers for the Vanderbilt-Ingram Cancer Center.

The Carells were also involved with assisting the educational endeavors of Vanderbilt undergraduates through the Carell Scholarship Fund they established. There are now 20 Carell Scholars and two Monroe J. Carell Jr. Baseball Scholars; 14 have graduated and eight are still students. In addition, a new Carell Scholar will enter Vanderbilt this fall.

Mr. Carell is survived by his wife of 52 years, Ann Scott Carell, three daughters, all of Nashville – Julia Carell Stadler (George), Edith Carell Johnson (David), and Kathryn Carell Brown (David); and six grandchildren, Julia Claire Stadler, George Monroe Stadler, Carell Elizabeth Brown, David Nicholas Brown, William Carell Johnson and Ann Scott Johnson. He is also survived by his brother, James W. Carell (Jan). **VM**

—JESSICA ENNIS



Zeppos named Vanderbilt's eighth chancellor

Nicholas S. Zeppos was chosen March 1 as Vanderbilt University's eighth chancellor.

The unanimous election of Zeppos, who has served as Vanderbilt's chief academic officer since 2002 and its interim chancellor since last summer, was announced following the final session of the Board of Trust's winter meeting.

At a press conference following the announcement, Zeppos stressed the importance of a strong medical center.

"I want Vanderbilt to continue to be a leader in health care and health care policy on the local, national and international levels," Zeppos said. "Health care is, and will continue to be, a priority and we will work to continue to be a leader in addressing the diseases that plague so many people in the world."

Zeppos was chosen as chancellor after a national search hard at work since the resignation of Vanderbilt's seventh chancellor, Gordon Gee, on Aug. 1, 2007.

Martha Ingram, chair of the Board of Trust, said she has come to know Zeppos as a friend. "This great university has come so far, so fast, and the principal reason is Nick's enormous intellect, his great vision, and his tireless commitment to Vanderbilt's students, faculty, staff and alumni."

Harry Jacobson, M.D., vice chancellor for Health Affairs, said Zeppos brings a tremendous amount of insight and experience to this vital role at a crucial and challenging time. "He understands the unique position Vanderbilt is in to expand the frontiers of patient care, health education and biomedical research to enhance the lives of people across the world."

Zeppos, 53, said he was "honored and grateful for the trust that the Board, faculty, students and alumni have placed in me at this critical time in Vanderbilt's history."

Since 2002, Zeppos has overseen the university's undergraduate, graduate and professional education programs.

He also has led the University's Shape the Future fund-raising campaign, which exceeded its \$1.25 billion goal two years ahead of schedule and set a new target of \$1.75 billion by 2010.

He is married to Lydia Ann Howarth, a writer and editor. They have two sons, Benjamin, 21, and Nicholas, 18. **vm**

VUMC improves in rankings

Vanderbilt has reached a milestone in funding from the National Institutes of Health — the School of Medicine is now ranked No. 10 among U.S. medical schools for NIH funding in fiscal year 2007 (FY07).

While many of last year's top-ranked medical schools experienced flat or even decreasing funding, Vanderbilt's grant funding increased from \$245.6 million to \$282.3 million, an increase of \$36.7 million — the largest increase among the top 10 schools of medicine.

While the NIH no longer publishes rankings of individual schools or departments, the NIH Web site provides a database that lists all grants and contracts awarded to schools of medicine in the United States.

According to an analysis of those figures, Vanderbilt rose from 12th place last year to 10th in the nation in FY07, passing the University of Michigan and Stanford University.

"We've made strategic investments in research infrastructure, but this primarily reflects a tremendous effort on the part of the faculty," said Jeff Balser, M.D., Ph.D., interim dean of the School of Medicine.

Overall, VUMC research funding from all sources, including private foundations, corporations and federal agencies, has doubled since 2001, and now exceeds \$400 million per year.

In other ranking news, VUSM now ranks 16th out of 126 accredited medical schools, according to *U.S. News and World Report's* annual ranking of graduate education programs and health disciplines released March 28.

In the new edition of America's Best Graduate Schools, VUSM jumped two spots from 18th to tie for 16th place with the Pritzker School of Medicine at the University of Chicago.

Harvard University once again ranked first among research medical schools, with Johns Hopkins University second. **vm**

-LYNNE HUTCHISON



Work continues at Vanderbilt Health at One Hundred Oaks, the 440,000-square-foot campus extension off I-65, four miles south of downtown Nashville. Longtime 100 Oaks Shopping Mall is getting a makeover for this endeavor which includes the already relocated Pediatric Rehabilitation Services (shown above). Other groups will move later this year, including Obstetrics and Gynecology, the Breast Center, Dermatology and the Center for Surgical Weight Loss.

Colonoscopy disparities persist: study

African-Americans are far more likely to be diagnosed with and to die from colorectal cancer than whites or other minority groups. Despite this increased risk, a new study led by Vanderbilt Medical Center researchers found that African-Americans are far less likely to undergo colonoscopy screening than whites, even when both groups have a family history of colorectal cancer.

Lead author Harvey Murff, M.D., M.P.H., assistant professor of Medicine and lead author of the study published in the *Archives of Internal Medicine*, said family history is a strong predictor of colorectal cancer risk

"Individuals who have a first-degree relative with colorectal cancer have a twofold to threefold increased risk of developing the disease and they are likely to be diagnosed with the malignancy 10 years earlier than patients without this family history," said Murff. "We wanted to know if people who knew about their inherited risk factors would be more likely to undergo screening."

The National Cancer Institute estimates 148,810 Americans will be diagnosed with colon or rectal cancer in 2008, with 49,960 deaths from both types of cancer. In addition to family history, a diet high in total fat and meat, and cigarette smoking are risk factors.

The researchers, representing Vanderbilt-Ingram Cancer Center, Meharry Medical College, the U.S. Department of Veterans Affairs and the International Epidemiology Institute, found African-Americans who had multiple first-degree relatives diagnosed with colorectal cancer were about half as likely as whites with the same family history to have undergone recommended screening tests like colonoscopy during the previous five years. For both groups, the most common reason given for not having the screening tests was the lack of a recommendation from their health care provider. **VM**

-DAGNY STUART



ISTOCKPHOTO/KELLY CLINE

Study tracks barriers to managing diabetes

A new study shows that children with obesity-related diabetes are reporting serious difficulties in making basic lifestyle changes that could save them from a lifetime of complications.

The study of 103 adolescents (ages 12 to 21) with type 2 diabetes, most of whom are overweight, shows many children and teens do not possess good self-management behaviors. The study — published in the April issue of the journal *Pediatrics* — was conducted by the Vanderbilt Diabetes Research and Training Center, working with patients at the Vanderbilt Eskind Pediatric Diabetes Clinic.

The respondents reported that making basic lifestyle changes that will lead to better future health, in areas such as diet and exercise, is more difficult than adjusting to medical management of their disease. Medical management includes daily medicines, blood sugar monitoring and injections of insulin.

"Type 2 diabetes in children is such a new problem that we don't know a lot about these kids," said Russell Rothman, M.D., deputy director of the Prevention and Control Division of the Vanderbilt Diabetes Research and Training Center. "This study is one of the most comprehensive to date to look at who these kids are and the challenges they and their families face trying to take care of themselves."

Rothman and Shelagh Mulvaney, Ph.D., assistant professor in the School of Nursing, along with physicians and nurses from the Eskind Pediatric Diabetes Clinic, performed the telephone survey. Most children were either overweight or obese (possessing a body mass index (BMI) over 85 percent of the average for their age and weight).

More children (37 percent) reported the most difficult part of managing their disease was changing health habits like diet and exercise; 31 percent perceived taking insulin to be the most difficult part; and 18 percent had the toughest time adjusting to finger sticks for blood sugar tests.

More than 80 percent of patients reported taking medication regularly, and nearly 60 percent monitored their glucose twice daily. However, about 70 percent reported watching at least two hours of TV each day, and 63 percent said they did not currently participate in physical education classes. Children reported that barriers to making changes were: dealing with cravings or temptations, feeling stressed or sad, and frequently eating outside the home.

The study also found racial disparities, with African-American patients having worse blood sugar control. **VM**

-CAROLE BARTOO



NEIL BRAKE

A fond farewell

BY LYNNE HUTCHISON

After seven years as dean of the Vanderbilt University School of Medicine Steven Gabbe, M.D., has left to become the senior vice president for Health Sciences and chief executive officer of the Medical Center at Ohio State University.

Under Gabbe's leadership, the School of Medicine jumped from 21st place in 2001 to 10th place in 2007 in National Institutes of Health research funding. VUSM also rose in the most recent *U.S. News and World Report* medical school rankings, from 18th to 16th place.

During Gabbe's tenure, the number of faculty rose from about 1,200 to just less than 1,900. Women now make up one-third of the faculty, and the number of underrepresented faculty in medicine has increased from 46 to 94.

The clinical volume of the faculty practice grew as well, from more than 680,000 to

nearly 1.1 million clinic visits per year and VUSM's budget has more than doubled, from just over \$348 million to more than \$766 million. Support from the National Institutes of Health has risen from \$108 million to more than \$282 million, placing VUSM 10th in research funding.

"Steve has been a powerful force behind our emergence as an eminent academic medical center," said Harry Jacobson, M.D., vice chancellor for Health Affairs. "He has built a team of educators and associate deans at the tops of their respective fields. He has led a multi-year process to upgrade and modernize our training facilities, and has assembled a student body and faculty full of heart, energy and commitment. We are immeasurably richer for his contributions."

"While I look forward to new challenges at Ohio State, I also find myself looking

back," Gabbe said. "Over my seven years as dean, I've watched our faculty grow and our students succeed in every arena of patient care, education and research. From my perspective, the School's greatest source of pride – and the thing I will miss the most – are our students and faculty. They are the soul of the School, and it is amazingly hard to say goodbye to them.

"I know VUSM will continue to rise in excellence and in prominence," Gabbe added. "Vanderbilt's School of Medicine was a great school when I arrived, and it will be an even greater school in days to come."

Student numbers have also risen in seven years. The Class of 2012 boasts 5,032 applications – the largest number in a decade. "One student out of every eight who applies to medical school in this country applies to Vanderbilt," Gabbe said.

The number of women in the incoming class equals the number of men. The class includes 10 underrepresented minorities, up from just one in 2001. The mean MCAT score is currently 11.5, while the GPA is 3.8.

Gabbe came to Vanderbilt in March 2001, replacing John E. Chapman, M.D., who graduated nearly two-thirds of the school's living graduates during his 25-year tenure. Gabbe's accomplishments have included revising the medical curriculum, increasing student, resident and faculty diversity, and solidifying Vanderbilt's reputation for training future leaders in medicine. He oversaw the creation of a new anatomy lab, the Center

for Experiential Learning and Assessment, and the Master Clinical and Master Science Teacher programs.

"Dean Gabbe is a wonderful supporter of medical education and of our medical students," said Bonnie Miller, M.D., associate dean for Undergraduate Medical Education. "He will leave a proud legacy of accomplishment – a new curriculum as well as beautiful new educational facilities. I am very sad that he is leaving, but very happy for him as he moves on to a great job.

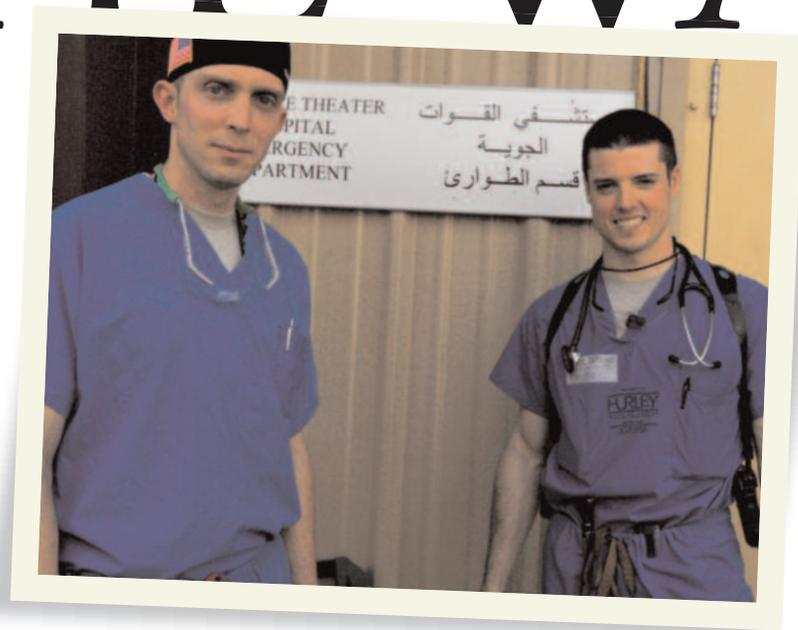
Jeff Balsler, M.D., Ph.D., associate vice chancellor for Research, is serving as the Medical School's interim dean. He received his M.D. and Ph.D. in Pharmacology from Vanderbilt in 1990.

Gabbe previously served as director of fetal medicine at the University of Pennsylvania School of Medicine, professor and chair of the Department of Obstetrics and Gynecology at Ohio State University College of Medicine, and chair of the Department of Obstetrics and Gynecology at the University of Washington School of Medicine.

He is a leading expert on the complications of diabetes and pregnancy and the author of more than 160 peer-reviewed papers.

Gabbe is married to Patricia Temple, M.D., professor of Pediatrics at Vanderbilt, who will take a faculty position in the Department of Pediatrics at Ohio State and continue her research on premature birth outcomes. **VM**

LESSONS ★★★ FROM ★★★ THE WAR



PAUL DEFLORIO AND ROBERT ELLER ARE

YOUNG PHYSICIANS, ONLY A FEW YEARS

OUT OF MEDICAL SCHOOL. BUT THEY

BOTH SAY THEY HAVE EXPERIENCED

THE HIGHLIGHT OF THEIR CAREERS.



WRITTEN BY JESSICA PASLEY
PHOTOGRAPHS BY JULIANNE SHOWALTER, U.S. AIR FORCE



The two Vanderbilt University School of Medicine alumni are physicians at the Air Force Theater Hospital at the U.S. Air Force base in Balad, Iraq, about 30 miles north of Baghdad. The pair, along with a team of about 30 physicians, treat up to 500 patients a month, about half of them trauma victims.

Neither would have it any other way.

For Maj. DeFlorio, M.D., an emergency room physician at Wilford Hall Medical Center on Lackland Air Force Base in San Antonio, Texas, the assignment to the 332nd Expeditionary Medical Group is his second tour.

“As an ER physician [in Iraq], the practice is very different,” said DeFlorio, MD’01. “We don’t see a lot of primary care patients. Our primary mission is to receive trauma casualties from the war, the vast majority of which are dropped off 50 yards outside the door by a Blackhawk helicopter.

“I went into the military because I always wanted to serve. Deploying to the combat zone has been the highlight of my professional life.”

After an internship at Andrews Air Force Base in Maryland, he received a civilian deferment to do his emergency medicine residency at the University of Michigan, which he completed in 2005 before joining the staff at Wilford Hall. He was deployed during the summer of 2006.

The patients treated at Balad run the gamut from critically ill U.S. troops, Iraqi troops and other casualties of the

war like a 4-day-old baby recently treated at the facility.

“The most humbling experience is the bravery that our injured troops routinely display,” DeFlorio said. “Men and women with severe injuries and traumatic amputations will regularly refuse morphine, telling us not to worry about them but to take care of their buddies.

“When we have U.S. casualties die, despite our best efforts, it’s heart-rending. And when we have Iraqi children caught in the conflict who are injured and die ... these are the two hardest parts of my job.”

The Air Force Hospital, a 107,000-square-foot facility is the central hub of medical operations theater. It offers the largest group of subspecialists in Iraq, who care for not only Americans but also Iraqi police, Army, detainees and civilians.

As a subspecialized otolaryn-

gologist, Maj. Eller, M.D., agrees that there is a vast difference between the war wounds and the civilian trauma that they encounter as physicians at home.

“At home we see car wrecks and blunt trauma. Here, it’s mostly blast injury to the face and neck.”

Americans have a 99 percent survival rate coming through the hospital in Balad because it is well set up to handle trauma, and because high quality care continues once they are back in the United States. The injured are stabilized and quickly sent to the U.S. for state-of-the-art care – sometimes arriving home less than 48 hours after their injury.

“The Iraqis are different,” said Eller, MD’00. “They don’t have anywhere else to turn. Sometimes we look at

[an injured face] and say, ‘Wow, what’s left to work with?’”

“Luckily, we are authorized to care for these casualties, and have the resources to do full reconstructions. For example, in November an Iraqi who was injured at a check point had his lower face blown off. We recently performed the final stage of reconstruction and I’m very pleased that he looks about as normal as anyone else. Six months ago he did not have a lower jaw.”

This is Eller’s first tour. He completed his otolaryngology

“The fact is, we have the best job in the entire conflict – trying to save lives and heal people. It’s one of the hardest tasks outside of combat, but it’s the best job in the war.”



residency at the University of Alabama Birmingham in 2005, followed by a laryngology and voice surgery fellowship in Philadelphia. He joined the staff of Wilford Hall Medical Center as an attending head and neck surgeon in 2006.

As a member of a military family, he volunteered to serve in Iraq.

"I admire our enlisted soldiers who have volunteered to join the military knowing full well that they would be sent to Iraq. Serving them and the Iraqi people as a surgeon was very important to me. I could not pass up a chance to come," said Eller.

"If you could pick any duty in a war, this is the one I'd pick."

And they are not alone. DeFlorio's attempt to return to Iraq earlier than scheduled was unsuccessful because he had to wait until a spot opened up.

"Despite all the sacrifices, none of my colleagues wanted to give up their spot out here," he said. "The fact is, we have the best job in the entire conflict – trying to save lives and heal people. It's one of the hardest tasks outside of combat, but it's the best job in the war."

There are about 350 people working in the Air Force Theater Hospital, but the real "nuts and bolts" of the operation are the enlisted men and women, the pair agreed. Although each person has his or her own medical specialty, they are all trauma workers in Balad.

On any given day, patients will be wheeled into the hospital, stabilized and moved to the operating room or intensive care unit within 15 minutes.

Eller said it takes a team with great work ethic to run the hospital.

One recent week Eller spent 73 hours operating. As the only Ear, Nose and Throat specialist in Iraq, he has been on call for three months continuously. His responsibilities include surgical trauma as well as holding a regular clinic to serve as the ENT referral for the primary care physicians at small bases throughout the war zone.

Both physicians agreed that meeting the challenges of their professions under

extraordinary circumstances has been daunting, but what put them at ease is the training from Vanderbilt.

"Vanderbilt makes shaping physicians as professionals a priority," said Eller.

"I'd like to thank all the teaching physicians and professionals who turned me from a medical student into a well-trained doctor. They laid the foundation upon which I could grow professionally, so that ultimately I could meet the challenges of wartime medicine," added DeFlorio.

"We are part of a long tradition of military physicians at Vanderbilt – just look at the class pictures from the early 1940s hanging in Light Hall. Many of those graduating students are in uniform. Rob and I are proud to continue that legacy."

After their tour ends, early this summer, both men will return home to San Antonio to their families – DeFlorio to his wife, Amanda, and Eller to his wife Kristen, MD '02, and daughter, Anna Katherine, 2.

The pair will complete an extensive reprocessing procedure that includes two weeks of leave to allow for readjustment and time with their families before heading back to work.

"In terms of coming home to see non-war emergency department patients, there's definitely a big transition," DeFlorio said. "It is a challenge to go from seeing almost exclusively critically ill patients, to seeing a lot of people who have very minor complaints, like chronic



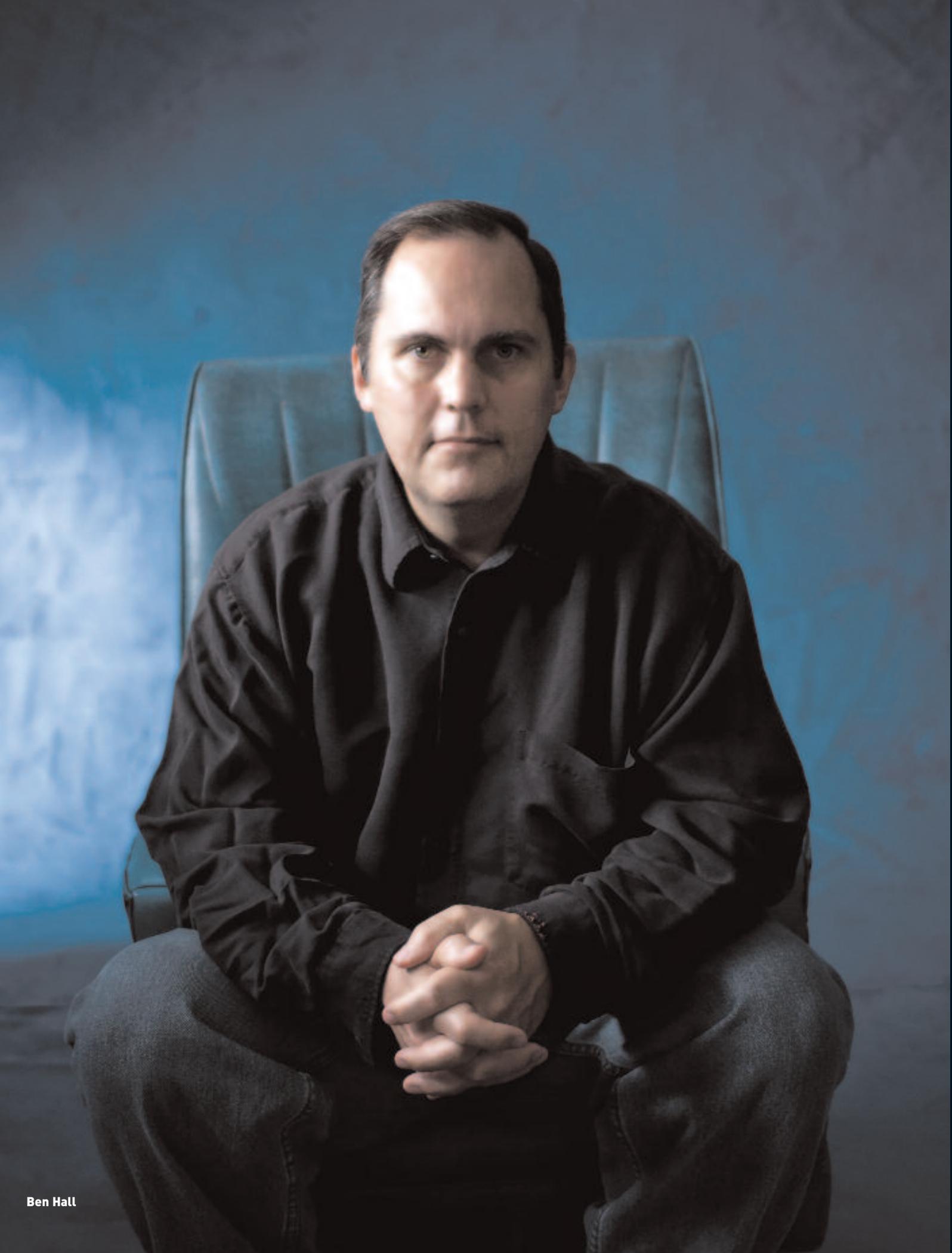
Maj. Robert Eller, M.D., left, and Maj. Paul DeFlorio, M.D., evaluate a patient.

back pain and upper respiratory tract infections. The pathology in-theater is so extreme that it commands focus. When the pathology at home is minor, it forces one to refocus on the patient. Last time I came back, this took me a good month. I had to deliberately check myself to ensure I was approaching my patients with the right attitude – no matter how minor their complaints. After about a four-week transition, you carry only the lessons learned from the war, and can move forward back into regular practice."

The readjustment won't last long.

In 15 months they'll return to Balad to continue their mission of taking care of "our nation's heroes...and the Iraqis caught up in it." **VM**

JULIANNE SHOWALTER, U.S. AIR FORCE



Ben Hall

A MIND
disabled

Ben Hall was 33 and living in Ohio eight years ago when he began having delusional thoughts. “I thought the police were out to get me; that people were trying to do me in. I felt like I was being watched,” he said. “I would go into the grocery store and think everybody was looking at me – the people walking into the grocery, the people driving down the road.”

WRITTEN BY **NANCY HUMPHREY**
PHOTOGRAPH BY **DEAN DIXON**

Hall,

who was soon diagnosed with

schizophrenia, has been helped by the drug clozapine, commonly used to treat patients with schizophrenia, but he still has trouble functioning in society.

He speaks haltingly – trying to organize his thoughts into words as he talks about the difficulty he has had holding a job and having friends and a girlfriend. Recently unemployed from his job with the State of Tennessee, he says his friendships are “few and far between.”

When asked to describe what it’s like to have schizophrenia, Hall has trouble finding the words. He apologizes. Then they come, effortlessly. “Schizophrenia, untreated, is like riding an endless roller coaster,” he says. “For some people this might be fun, but it’s an emotional spin of downs and ups. Sometimes you’re feeling OK, and everything is looking positive. Sometimes you have these racing thoughts and delusional thinking. You know something is wrong, but everything is happening so fast.”

A COMPLEX GENETIC DISORDER

Schizophrenia is a chronic, severe and disabling brain disorder that affects about 2 million American adults, about 1 percent of the population age 18 or older. The disease is characterized by hallucinations

and delusions (positive symptoms), a loss in the pleasure of everyday life – diminished affect, lack of motivation and drive, (negative symptoms) – and problems with attention, verbal fluency, long-term and working memory and functions that allow an individual to plan and organize (cognitive symptoms). Symptoms usually develop in men in their late teens or early 20s and in women in their 20s and 30s, but in rare cases, can appear in childhood. One tragic statistic about schizophrenia is that people who have it attempt suicide much more often than people in the general population, and even more tragic, about 5 percent (mostly young males) succeed.

Highlighted in “A Beautiful Mind,” the movie that won the 2001 Academy Award for best picture, schizophrenia is a complex genetic disorder, the result of a large number of genes, each of small effect, as well as a variety of environmental factors, some of which occur *in utero*, others later in development. Only some of the genes and biological mechanisms which lead to schizophrenia have been identified, but progress toward understanding the disorder is proceeding at a rapid rate.

Current drug treatments are most successful in eliminating entirely or reducing the frequency and severity of the positive symptoms – the delusions, hallucinations and bizarre behavior.

The first generation of antipsychotic medications, known as “typical” antipsychotics, was discovered serendipitously and have been available since the mid 1950s. The second generation, known as “atypical,” has come into use in the last 20 years. Both classes achieve their antipsychotic effect by blocking the action of the neurotransmitter dopamine in the so-called limbic brain, thought of as a center of emotion and reward. The atypical drugs are effective at a much lower degree of blockade of the type of dopamine receptors important for psychosis because they also block a subgroup of serotonin receptors which have been known, in part, through the research of Vanderbilt faculty member Elaine Sanders-Bush, to be important for the hallucinogenic effects of LSD and mescaline.

The first antipsychotic drug, chlorpromazine, was developed as a calming pre-treatment for surgery, but when found to be highly sedative it was tried in agitated psychotic patients. In this group of patients it was observed to achieve much more than calming, and within days or weeks, it controlled psychotic symptoms. This occurred during the period when frontal lobotomies were occasionally used as a treatment for schizophrenia and falsely believed to be a “cure.” Chlorpromazine was hailed as a miracle agent and ushered in the modern era of psychopharmacology, the study of

“Schizophrenia, untreated, is like riding an endless roller coaster.”



DEAN DIXON

Ben Hall

drugs which influence brain and behavior, which can treat or mimic mental illnesses such as schizophrenia, depression, panic disorder and obsessive-compulsive disorder.

Patients with schizophrenia respond differently in terms of efficacy and side effects to the numerous antipsychotic medications which have been developed since chlorpromazine, most likely because of the differences in genetic factors which contribute to the disease or affect the metabolism of the drugs. There are no current tests that reliably predict which drug will be the most effective and tolerable agent for a specific agent. So, sometimes, several different drugs must be tried before finding the one that best controls the most symptoms while producing the least side effects. Nearly 30 percent of patients, about 600,000 people, remain

persistently psychotic when treated with adequate doses of the first-generation drugs chlorpromazine or haloperidol, and are referred to as treatment-resistant.

TREATING THE UNTREATABLE

Vanderbilt Medical Center's faculty includes one of the world's leading authorities on schizophrenia, Herbert Meltzer, M.D., who in the late 1980s established the antipsychotic drug clozapine as the gold standard for treating patients with treatment-resistant schizophrenia. However, clozapine causes a serious side effect called agranulocytosis, a total destruction of the white blood cells that fight infection. People taking

clozapine must have their white blood cell counts monitored every week or two because if agranulocytosis has occurred, or appears to be developing, stopping clozapine can reverse the process before a possibly fatal infection develops.

Two decades later, Meltzer, Bixler/Johnson/Mays Professor of Psychiatry and director of Vanderbilt's Schizophrenia Program, has improved on his own research. He and colleagues have shown that the success of clozapine in treating this population was not due to the unique pharmacologic features of the drug itself, but the fact that it was used at higher doses and for longer periods of time than those customarily needed to treat the 70 percent of patients with schizophrenia whose positive symptoms respond well to the currently available

atypical antipsychotic drugs aripiprazole, olanzapine, quetiapine, risperidone or ziprasidone.

The study, published in the Jan. 23 issue of *The Journal of Clinical Psychiatry* and funded by Eli Lilly, included 40 men and women, ages 18 to 58, diagnosed with schizophrenia or schizoaffective disorder, which many think is part of the same spectrum of illness. For the blinded, randomized multicenter trial, patients were recruited from three U.S. outpatient community mental health treatment facilities, including Nashville's Centerstone Mental Health Center.

The results showed that the drug olanzapine, whose pharmacology is considered closer to clozapine than that of any other drug available, when used at three to four times the dose needed for non-treatment patients, was as effective as clozapine in improving psychopathology and cognitive impairment in treatment-resistant

patients. The study showed that treatment-resistant patients taking higher doses respond more slowly than average patients taking conventional doses. In fact, both needed to be given for six months before a good treatment response occurred in the majority of patients in the study, compared to six weeks for the average patient at the standard dose range.

"The results provide another option for treatment of those patients," says Meltzer, who this year won Vanderbilt's Grant Liddle Award for Clinical Research, based on his research with atypical antipsychotic drugs. This research included the first demonstration that clozapine was more effective in treatment-resistant patients, that it improved cognition function, and reduced the risk for suicide in patients with schizophrenia who were at high risk to make another attempt. Meltzer is credited with the most widely held theory for the mechanism of action

of clozapine and related drugs – strong blockade of serotonin receptors and weak blockade of dopamine receptors.

Meltzer's next step in this aspect of his research is to study higher doses of the most widely used drug in the treatment of schizophrenia — risperidone. He and his Vanderbilt colleagues, William Bobo, M.D., and Yuejin Chen, M.D., Ph.D., plan to study the long-acting injectable form of risperidone because it does not produce as much weight gain or other metabolic changes as clozapine and olanzapine, and because there is better compliance with the long-acting form. Meltzer is particularly hoping to attract patients to the study who have failed to respond to standard doses of the drug. He hopes to enroll 160 patients, 80 of those in Nashville.

While clozapine and related drugs have helped with cognition in many patients, it is recognized that this class of drugs will not be sufficient to produce all the needed improvement. So Meltzer's group has been investigating a series of add-on therapies to further enhance the levels of two chemicals in the brain whose activity may be less than optimal – dopamine and acetylcholine. The Meltzer team is currently recruiting patients with schizophrenia whose psychosis is being treated with atypical antipsychotic drugs for add-on cognitive enhancement therapy with the drug Nu-Vigil.

And during that study, using brain imaging and genetic markers, he and Vanderbilt colleagues Adam Anderson, Ph.D., and Stephan Heckers, M.D., chair of the Department of Psychiatry, will investigate why higher doses are more effective in these patients and why it takes longer to get a response.

ROLLING IN LIKE A FOG

Elyn Saks, a Vanderbilt University graduate and a successful law scholar, is taking a very high dose of clozapine. She



Herbert Meltzer, M.D., is credited with the most widely held theory for the mechanism of action of clozapine and related drugs – strong blockade of serotonin receptors and weak blockade of dopamine receptors.

As a college student at Vanderbilt, a Marshall Scholar at Oxford University, and a law student at Yale, Elyn Saks' world began to unravel.



DANIEL DUBOIS, VANDERBILT MAGAZINE

Elyn Saks

credits the drug and intensive psychoanalytic psychotherapy in helping the clarity of her thinking and the ability to cope with the stresses of everyday life, Meltzer said.

Saks, an endowed professor at the University of Southern California Gould School of Law, and former Vanderbilt Founder's Medalist, is the author of a bestselling book, "The Center Cannot Hold: My Journey Through Madness." In it, she compares her childhood in the 1950s and early 1960s in Miami to a Norman Rockwell magazine cover or a 50s sitcom. She had kind and caring parents who loved each other and their children. They filled their home with music and laughter and enjoyed family activities together.

But her life was not as idyllic as it seemed. In her book, Saks says she

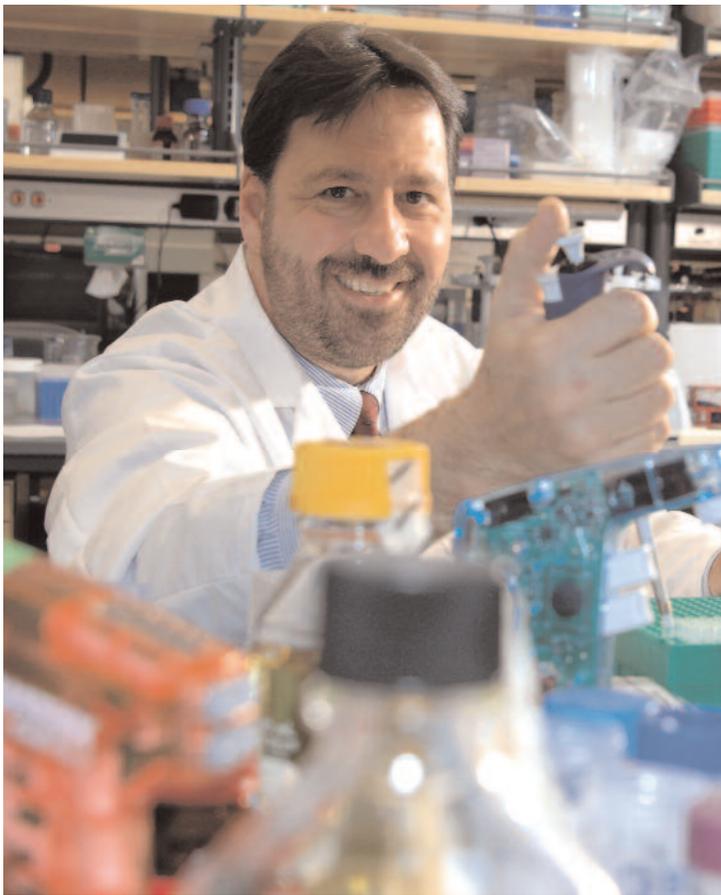
developed "quirks" when she was 8. She would line up shoes in her closet or beside her bed. She washed her hands obsessively. She imagined things, including a man standing outside her window, every night, waiting to break in and kill her family.

Her parents dismissed many of her paranoid thoughts and odd mannerisms as typical childhood fantasies, but there were things they didn't know – like an episode when Saks was 8 and felt like she was dissolving. "Consciousness gradually loses its coherence. One's center gives away. The center cannot hold," she wrote in her memoir, one of *Time* magazine's top 10 nonfiction books of 2007. "The 'me' becomes a haze, and the solid center from which one experiences reality breaks up like a bad radio signal."

As a college student at Vanderbilt, a Marshall Scholar at Oxford University, and then a law student at Yale, her world began to unravel. She became depressed, socially isolated and lost a lot of weight. Her thoughts become more paranoid and more delusional. Her quirkiness had progressed into full-blown schizophrenia. She spent time in and out of psychiatric facilities, and soon after she began law school at Yale, she was confined to bed for 30 hours during a hospitalization, arms and legs restrained and a net thrown over the rest of her immobilized body.

"Schizophrenia rolls in like a slow fog, becoming imperceptibly thicker as time goes on," she writes in her book. At first the day is bright enough, the sky is clear, the sunlight warms your shoulders.

NEIL BRAKE



Jeffrey Conn, Ph.D., is studying glutamate receptors, an approach that might have a dramatic effect in treating the cognitive symptoms of schizophrenia.

But soon, you notice a haze beginning to gather around you, and the air feels not quite so warm. After awhile, the sun is a dim light bulb behind a heavy cloth. The horizon has vanished into a gray mist, and you feel a thick dampness in your lungs as you stand, cold and wet, in the afternoon dark.”

FINDING NEW TYPES OF DRUGS

Historically, the treatment of schizophrenia has centered on compounds that block the receptors for dopamine pathways in the brain. That’s the way that the vast majority of antipsychotics work, by blocking dopamine activity. Antipsychotic

drugs, both first-generation and second, are effective in reducing hallucinations and delusions in patients with schizophrenia, but not in attacking the entire spectrum of symptoms.

A team of Vanderbilt researchers, led by Jeffrey Conn, Ph.D., Lee E. Limbird Professor of Pharmacology and director of Vanderbilt’s Program in Drug Discovery, is working on a different approach, one that might have a dramatic effect in treating the tragic cognitive symptoms of the disease – social withdrawal, inability to experience pleasure, flawed memory and verbal function.

The target: glutamate receptors, which respond to the main “excitatory” neurotransmitter glutamate to promote

the passing of messages from one neuron to the next. The new efforts involve trying to manipulate glutamate systems in the brain in a way that would have a therapeutic benefit.

“The hope is by targeting glutamate, which is a much more fundamental transmitter to these circuits that are involved in information processing and cognition (than dopamine), that we may be able to achieve efficacy not only in controlling hallucinations and delusions, but also the cognitive disturbances,” Conn said.

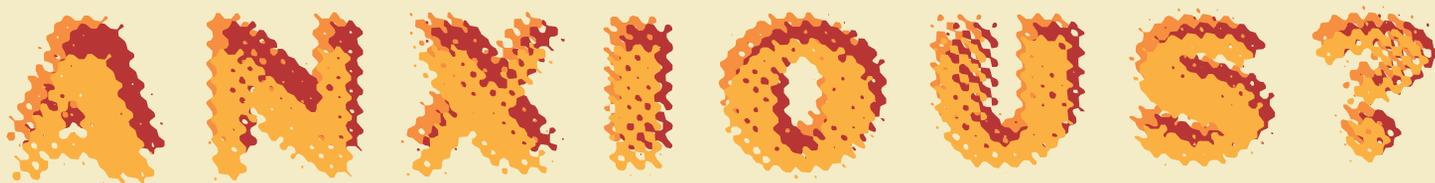
“Most people in the field treating patients think that cognitive disturbances and negative symptoms might be more important to treat than the positive symptoms in the overall outcome of patient care. That’s why we want to move away from these dopamine-related therapies to try to target glutamate systems where you may have a more fundamental effect.”

You can’t just dive in and manipulate a system that is involved in virtually every function of the brain – the effects would be too far-reaching, so the Vanderbilt team is looking at a more subtle way of manipulating the glutamate system.

They’re trying to increase the function of the primary glutamate receptor implicated in schizophrenia, the NMDA receptor. NMDA receptors are involved



FEELING



Humans are instinctively social creatures.

They work together. They play together. They form relationships with each other. Interacting is an important part of growing and learning.

But, for 15 million American adults suffering from social anxiety disorder, interacting socially can bring overwhelming feelings of dread. These individuals are excessively self-conscious in everyday social situations. They may worry for days or weeks before a dreaded situation, such as an interview or social gathering. Then, they may worry for hours afterward about how they were judged.

The symptoms are not pleasant, either. They may sweat profusely, blush or tremble, or have difficulty talking. They may experience nausea and diarrhea. Their hearts may pound forcefully in their chests.

In more severe cases, the physical symptoms and feelings of dread and fear are so strong or negative, people just start to avoid certain situations altogether. This fear can be debilitating and prevent a person from pursuing normal life activities, and even their own dreams.

WRITTEN BY **PAM SHERBORNE**
ILLUSTRATION BY **JAMES STEINBERG**



ANNE RAYNER



NEIL BRAVE

Vanderbilt researchers such as Jenni Blackford, Ph.D., left, and Judy Garber, Ph.D., are studying different methods to find the appropriate interventions for treating or preventing anxiety disorders.

“At first they avoid public speaking or going to parties,” said Jenni Blackford, Ph.D., assistant professor of Psychiatry at Vanderbilt Medical Center. “But then the fear of the fear can result in not pursuing friendships or romantic relationships, which can then extend to work.”

Anxiety takes a toll on daily lives, and not just on the person experiencing the illness, but also their families, said Bruce Compas, Ph.D., the Patricia and Rodes Hart Professor of Psychology and Human Development at Vanderbilt.

“Then, it goes beyond,” Compas said. “It goes to their ability to be financially stable; to be able to contribute to society.”

FIRST, IDENTIFY

Anxiety disorder often develops in childhood or early adolescence, and occurs in both men and women, although some anxiety disorders are more common

in females. And, oftentimes, it’s a precursor of depression.

Both anxiety and depression, however, are very treatable when identified. Some people respond well to only psychological counseling or medication, but some respond better to a combination of both.

The struggle for caregivers, however, comes from identifying the disorder as early as possible. Once an individual starts experiencing the more severe symptoms, such as panic attacks, the harder it is to treat to a point of eliminating symptoms altogether.

Past studies have been helpful in identifying at-risk individuals. Using those studies as a baseline, Vanderbilt researchers such as Blackford and Compas, as well as Judy Garber, Ph.D., professor of Psychology, are studying different methods to find the appropriate interventions for treating or even preventing anxiety disorders.

Blackford has begun a five-year study, funded by the National Institute of Mental Health (NIMH), studying people with inhibited temperaments, those who were very shy as children and have continued that developmental path into adulthood. Using neuroimaging, she has been comparing their brain function to that of those with uninhibited temperaments. She will also be comparing their genes and hopes to identify one specific pathway to anxiety.

“I’m working to understand how inhibited temperament is a conferring risk for anxiety,” she said. “When we look at a group of people with anxiety, we are mixing together many different types of anxiety and many underlying causes. My approach is to look for individual differences, ways that each one of us is different, to understand risk factors for psychiatric illnesses.”

Although studying anxiety with neuroimaging isn’t new, Blackford is using a new method of studying brain function. Instead of looking at just the degree to which the brain responds, she is looking at the timing of the brain’s response, for example, how quickly the brain responds and how long the response lasts. She is finding that in people with inhibited temperaments, the amygdala (an almond sized-and shaped part of the brain that signals warnings) responds faster to new faces, than those they have seen several times.

Blackford said inhibited temperament is characterized by avoidance of novelty, such as new people, places or things. As predicted, her study group showed more sensitivity to novelty.

By identifying one specific developmental pathway and making it recognizable

ble, intervention might be possible for a young child. Parents could then teach their children adaptive strategies, or preventive measures could be taken.

A FAMILY AFFAIR

The family unit has been shown to have a significant impact on childhood development in studies of anxiety and depression. Research shows that children who have a parent suffering from depression are at higher risk to also become depressed.

Garber is studying depression in this at-risk group, specifically children whose parent(s) are being treated for depression. She wants to identify factors that increase the chances of these children developing problems, and is also looking at methods of prevention.

“We know these children are vulnerable,” Garber said. “Sometimes, we begin to see problems in children as young as 8, 9 or 10 years old.”

These problems often take the form of anxiety, at school or at home. The anxious child may worry about a multitude of things, and may not be able to concentrate or sleep.

Garber has found that if a parent is currently depressed, the child doesn't function as well as the child of a parent who is being treated successfully for depression. As the parent gets better, there are concurrent positive changes in the child.

Data also suggest that anxiety and depression in children are under-recognized. It would help if parents had a greater awareness of what is typical behavior at a particular age, she said. “If they can recognize it, it can be normalized,” she said.

Garber is also studying the efficacy of a universal intervention program to help teens cope with stress and reduce future distress. Since 2006, this program has been offered to all students in wellness classes at Lebanon (Tenn.) High School.

“The empirical premise of our work is that children and adolescents who are psychologically healthy perform better in school and have more rewarding interpersonal relationships, compared to children who are distressed,” Garber said.

The intervention program is conducted in 90-minute block periods that meet once weekly for 10 weeks, discussing strategies for managing stress and the students' particular issues and concerns. The periods consist of single-gender groups of about eight to 10 students; parental permission is required to participate.

So far, approximately 500 students have participated. Preliminary results suggest the program is having beneficial effects.

“Our long-term goal is to make this program available to schools to include in their regular wellness class curriculum,” Garber said. “We would be especially interested in working with schools to train their teachers and school counselors.”

ANXIETY AND CANCER

Although most types of health care are anxiety-provoking to some extent for children, the anxiety is even greater for those battling cancer. Just the word, cancer, when associated with a child, can evoke feelings so strong that it has produced post-traumatic stress symptoms in parents in later years.

Compas just began a new five-year study, funded by the National Cancer Institute, on how communication

between parents and children diagnosed with cancer impact anxiety and depression in both the parent and child. While many childhood cancers are very treatable, the way families deal with this stress can have a lasting effect, long after the cancer is gone.

While young children may not understand the significance of their diagnosis, they can sense their parents' concern and fear. Older children not only understand the concern and fear, but also what a diagnosis of cancer can mean.

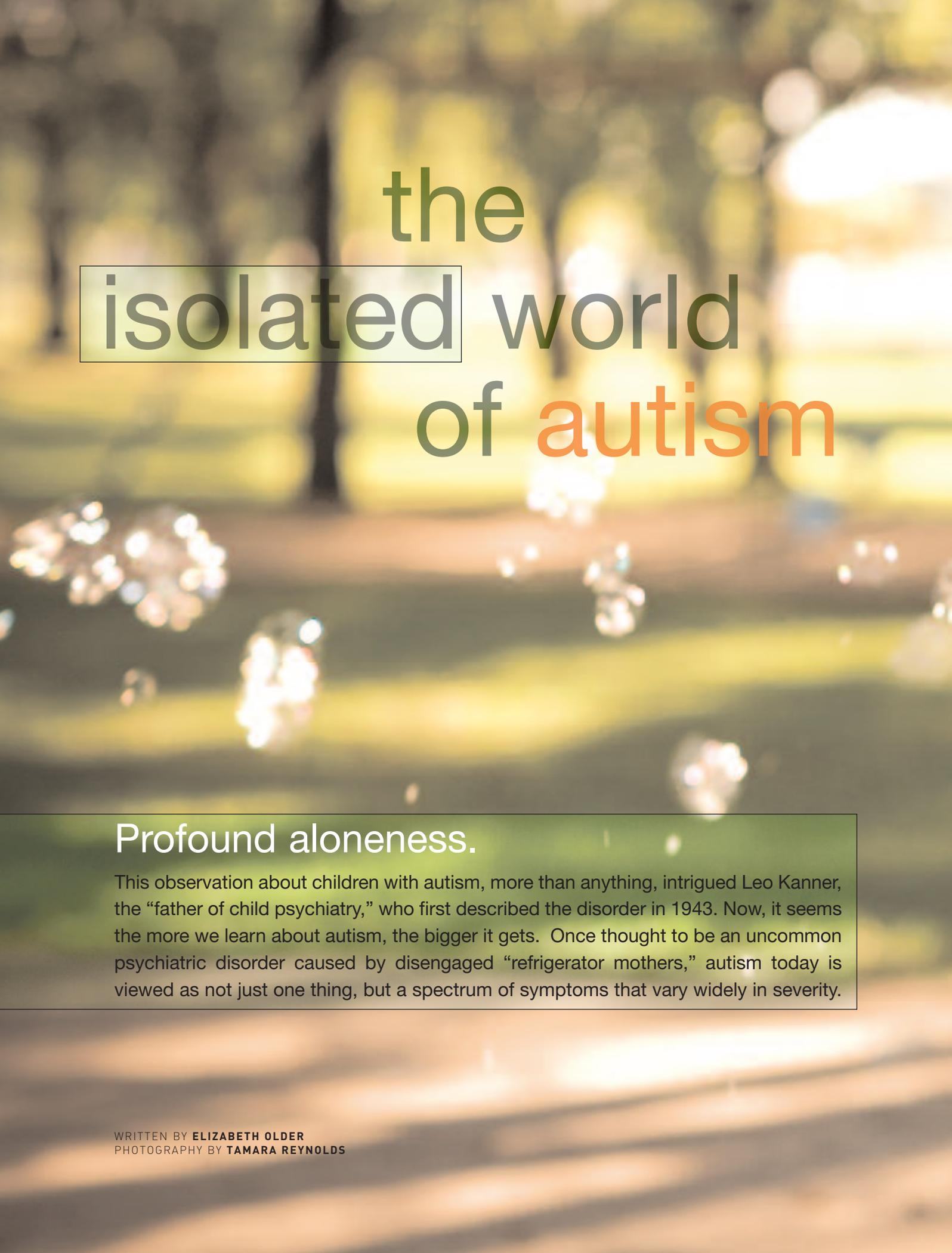
Compas is spending time observing the communication between parents and child.

“While we know we have these families in a somewhat unnatural environment while we observe, the differences we are already finding have been astounding to us,” he said. “We want to learn from the families who are doing it well.”

In general, Garber said the good news about all of this is that experts are now doing a better job at identifying at-risk individuals, and at treating these patients. “This is all good news,” she said.

Perhaps in years to come, researchers will find a way to reduce the staggering number of 15 million Americans struggling with social anxiety disorder, that number representing 2 million more people than the total estimated 2007 population of Pennsylvania.

Success, after all, will be measured by just one person who has struggled for a lifetime with social anxiety who can now stand up in front of a class or a group of friends, or even the world, without trembling, without heart racing, without nausea, and give a speech of a lifetime. **VM**



the isolated world of autism

Profound aloneness.

This observation about children with autism, more than anything, intrigued Leo Kanner, the “father of child psychiatry,” who first described the disorder in 1943. Now, it seems the more we learn about autism, the bigger it gets. Once thought to be an uncommon psychiatric disorder caused by disengaged “refrigerator mothers,” autism today is viewed as not just one thing, but a spectrum of symptoms that vary widely in severity.



Now

commonly called autism spectrum disorders (ASD), the name itself reflects the diversity of lifelong problems patients face.

Someone “on the spectrum” could have the less obvious social interaction lapses of Asperger’s syndrome, like Chase Wright of Hendersonville, Tenn., shown on the previous page, or a total inability to use words, interact with others and acquire rudimentary self-care skills. Add to these challenges a myriad of physical and psychiatric conditions – which could either relate to, be caused by or simply coexist with autism – that many of these patients exhibit and it’s easy to see why children

Jeremy Veenstra-VanderWeele, M.D., with a patient.

with autism and their family members spend many hours in many different medical offices.

“I tend to call these things brain disorders,” explains Jeremy Veenstra-VanderWeele, M.D., instructor of Clinical Psychiatry at the Monroe Carell Jr. Children’s Hospital, whose clinical practice serves mostly ASD patients and a few others who have obsessive-compulsive disorder without autism. “I think mental illness is an unhelpful term.”

First described by medical experts in the 1940s, autism has been closely associated with intellectual disability. The condition still is diagnosed solely on the observation of behaviors, but the understanding of the biological origins of autism has expanded. Experts have come to agree that many people with autism may have average or above-average intelligence, but may be unable to display this in usual ways because of communication impairments.

“Before we did have this very limited image,” says Courtney Burnette, Ph.D., a clinical assistant professor of Psychiatry, researcher and psychologist in the Treatment and Research Institute for Autism Spectrum Disorders (TRIAD) program of the Vanderbilt Kennedy Center for Research on Human Development and the Children’s Hospital.

Parents faced with a child’s autism diagnosis usually can grasp that it is based in a biological problem, says Burnette.

“I think what is more difficult to get across is the spectrum of behaviors in autism,” she explains.

While educators and other behavioral scientists have long worked on the autism frontlines, developing strategies to help affected children capture academic and social skills, experts in medicine and neuroscience now have joined them there.



These scientists are searching for answers in genetics and biology for what appears to be a highly heritable condition that some people see as epidemic in America today, where one out of every 150 children – four times more boys than girls – are believed to fall on the autism spectrum.

Problematic symptoms can require psychiatric intervention

“When I see children or adolescents in my clinic, the thing that tends to bring them to me are distressing symptoms,” says Veenstra-VanderWeele. A significant minority of children with autism will need a psychiatric consultation, he says. They may struggle with hyperactivity, aggressive behavior, or repetitive/ compulsive traits that lead to self-injury or social concerns.

“I think of all of these as things that cause the child and the family distress,” he explains.

“In adolescents, we’re more likely to start seeing depression,” adds Veenstra-VanderWeele, which reflects the difficulty many people with autism have with socialization, as well as a growing realization of being different from peers.

“I think you seek help as soon as you think there is an issue,” he advises, noting the span of resources that can be tapped, including Vanderbilt’s TRIAD program, which has a threefold mission encompassing clinical services, training and research. “It’s really important that kids be seen early.”

A psychologist in the TRIAD Parent Support and Education Program, Burnette diagnoses autism spectrum disorders and outlines strategies for children and families to use in school and other environments.

“We really try to target the behavioral issues with behavioral interventions,” she explains. But some children are referred for psychiatric consultation when serious issues are evident, she adds.

When Veenstra-VanderWeele sees one of these patients, he first evaluates

Young patients have special needs

Click! A boy of about 10, on a break from school, laughs as he plays with marbles. Nearby, teens sit in a small classroom, getting personal help from a teacher.

Later they’ll head to their bedrooms, down hallways painted with trees, flowers, animals. Downstairs, there’s a gym, a playground and even a swimming pool.

But this is no boarding school or camp. This is the children’s inpatient unit at the Vanderbilt Psychiatric Hospital, where patients as young as 4 are treated for disorders that make them a threat to themselves or others.

It’s the only psychiatric hospital in Middle Tennessee that has a specialized inpatient unit for children.

“One of the benefits of hospitalization is taking a child out of their home environment, putting them in a neutral setting and really seeing this child’s experience of the world and how they react to it,” says Ann Cross, CEO and director of patient services for the hospital.

It can be hard to understand that children can need such intensive treatment.

“You want to treat a child outpatient when you can,” explains Ro Wallace, nurse manager for child and adolescent programs. “But sometimes you can’t. Jumping out of a car repeatedly would get them in here, because that’s dangerous to the child. He may not be trying to hurt himself, but he’s not capable of keeping himself safe.”

Each child is treated by a multidisciplinary team including psychiatrists, RNs, mental health specialists, social workers and teachers. Group discussions are held several times a day. School is “a big part of the treatment,” Wallace says. “Most of these children have had unsuccessful school experiences.”

The hospital classrooms are valuable learning opportunities, Cross adds.

“School helps us identify how this child relates to others,” she says. “And we have rules, so we see how a child responds to them and how much frustration they can tolerate. We can start to use techniques to help them manage their anxiety and their frustration better.”

The staff uses all aspects of the inpatient environment for treatment.

The recreation area has a TV and therapeutic board games. A schedule on the wall breaks each day into manageable chunks to provide structure: School, lunch, snacks, dinner, phone calls home, showers, and a movie before bedtime at 8 p.m.

On a bulletin board, cars sporting children’s names head toward a “finish line” listing a goal: “anger management,” or “think before I act.”

Most children stay about a week, but remain in outpatient treatment after being discharged. And there’s always a need for the services.

“We stay full,” Wallace says. “If we discharge three patients, we get three new ones that night.”

– LAURIE E. HOLLOWAY

TRIAD Social Skills Camp, a three-week summer day camp at Vanderbilt, helps children with autism learn and practice social skills with typically developing peers.



COURTESY OF TRIAD SOCIAL SKILLS CAMP



COURTESY OF TRIAD SOCIAL SKILLS CAMP

whether underlying physical conditions might be affecting any psychiatric symptoms. Patients with autism tend to have certain medical issues, including sleep and gastrointestinal problems. Genetic disorders linked to autistic behaviors also should be ruled out, he explains. The best care often involves a team of specialists, says Veenstra-VanderWeele, from the pediatricians at the Children's Hospital to the psychologists at the Kennedy Center. In 2007, a multidisciplinary team of Vanderbilt clinicians led by Wendy Stone, Ph.D., and Beth Malow, M.D., was chosen for one of 15 Autism Treatment Network sites by the advocacy organization Autism Speaks and awarded a three-year, \$450,000 grant aimed at developing common standards of care.

While many of the patients who come to Veenstra-VanderWeele's clinic are taking multiple psychoactive medications, he says medication is never an automatic approach.

"I would say, for any physician, medication is the last thing you want to do," he explains. If a patient already is taking medications – antipsychotics and antidepressants are some that are prescribed – he assesses the effectiveness of those and tries to optimize their effect, sometimes changing the dosage or taking patients off a medica-

tion, or trying an alternative. Some autism activists argue against the use of psychoactive medications, saying they are difficult to dose and have never been tested or proven to treat autism in children.

"We use medication when we don't have much of a choice," he says, if the situation "feels crucial," such as when self-injury or violence is involved or a child's symptoms are confounding a major learning milestone like learning to read.

"It has to be a decision made by the parent in consultation with the physician," explains Veenstra-VanderWeele, who – as both a clinician and researcher – has a dual perspective on autism, an approach he says reflects psychiatry's "rich tradition of clinically oriented basic science driven by a desire to help patients."

Families cope with symptoms that span the spectrum

Belinda Pandey knows what it's like to make decisions about treatment for a child with autism. Two of three children – both boys – have severe autism, and they both take medication to help them function better.

"I was very anti-drug when I started," explains Pandey.

"Trevor was laid back until he was

5," she says of her second son, who was about 9 months old when his older brother was diagnosed with autism. Trevor's twin sister, Helen, does not have autism. "He hit age 5 and he just kind of fell apart... We just didn't know how to help him."

Susan McGrew, M.D., assistant professor of Pediatrics at Vanderbilt, suggested medication adjustments after doing a thorough medical history, says Pandey, and Veenstra-VanderWeele began seeing her son at McGrew's suggestion when he was 7. Trevor is now 9 and is better able to learn and control his behavior as a result.

"I feel like the progress he's been able to make is due in large part to the appropriate prescribing and dosing of medication," she says.

Like her younger son, 10-year-old Justin, who is also treated by McGrew, requires medication to help him control aggressive behavior.

"In the absence of medication, he would not be able to live with us," she explains.

Pandey is hopeful that research will discover new targeted therapies that will bring better outcomes for those who struggle with autism spectrum disorders. The nature of the brain, how it seems to

Autism prevalence report draws attention

When a 2007 Centers for Disease Control and Prevention report cited a one-in-150 prevalence of autism in children, the disorder drew the public attention parents and other activists had hoped for. Some believe the proliferation of childhood vaccines has triggered an autism epidemic, but these theories have not been borne out by scientific investigation. Earlier this year a federal agency did concede that vaccinations were a factor in triggering autism in an 8-year-old girl, citing an underlying contributing genetic condition called mitochondrial disorder.

Randy Blakely, Ph.D., thinks the rise in autism cases is most likely the result of doctors getting better at recognizing the markers of the disorder, which include problems with language development, social behaviors and repetitive-compulsive traits.

"The health care providers are much more aware of the features that can lead to a diagnosis," says Blakely, the Allan D. Bass Professor of Pharmacology and Psychiatry and director of Vanderbilt's Center for Molecular Neuroscience.

Researchers looking for genetic clues to autism have to agree on precise identifying parameters in order to arrive at reliable outcomes and compare results, he explains. The work is complex, as experts theorize that multiple genes are involved – perhaps as many as 20 – and they may work alone or in concert to cause the spectrum of symptoms that characterize autism.

"There may be a fairly large number of ways to get to a behavioral pattern that looks like autism," Blakely says. "There is no one cause for autism, just like there is no one cause for heart disease." Some clues may be gleaned from known genetic disorders that are linked to autistic behaviors – Fragile X

and tuberous sclerosis, for example.

"There are few biomarkers that have been reproducibly identified," explains Blakely, who has done groundbreaking genetic research on neurotransmitter transporters, which regulate brain chemical levels. "One that continues to intrigue us is hyperserotonemia." Elevated serotonin levels are evident in 25 percent to 30 percent of people with autism. Serotonin is linked to mood and anxiety, but how elevated levels of the brain chemical might relate to autism spectrum disorders is not yet known. Using genetically modified mice, researchers in the Blakely lab, including Jeremy Veenstra-VanderWeele, M.D., have discovered that hyperserotonemia can result if the animal carries an autism-associated mutation in the serotonin transporter.

"Some work we're doing has the opportunity to make a difference," Blakely observes. "That gives me a lot of inspiration." Other investigations – including research done by Vanderbilt Kennedy Center Director Pat Levitt, Ph.D., who holds the Annette Schaffer Eskind Chair – are raising expectations for a breakthrough in understanding more about the genetic influences in autistic disorders.

One breakthrough might make a difference

While welcoming a new emphasis on funding research to look for the genetic causes for autism, some parents and activists in the field believe other treatment avenues also deserve more attention, including the use of special diets and vitamin supplementation. The Vanderbilt experts are cautious about giving credence to these since they have not been scientifically studied or proven safe or effective.

"I think that particularly when you're exposing children to things that aren't studied, it's important to study them," says Veenstra-VanderWeele, a psychiatrist at the Monroe Carell Jr. Children's Hospital, adding that at least one child has died as the result of chelation therapy to remove mercury and other heavy metals from the body. "One has to be very careful to measure the risks and the potential benefits."

But, even so, these experts see the potential to learn something from anecdotal evidence.

"There are extremely important leads that come out of case studies and individual reports," says Blakely, pointing to longtime reports that some autistic children have exhibited improved behaviors while running a high fever.

"I think that's actually an incredibly important lead," Blakely says. It could suggest, he observes, that the autistic brain at any age may have the potential to function normally, but is being inhibited in some unknown way.

"We have significant evidence for heritability in autism," says Veenstra-VanderWeele. Some twin studies have shown that genetics may explain more than 90 percent of autistic cases.

"That doesn't mean there aren't other factors," he adds, including environmental influences.

With multiple genes that most likely converge in a variety of ways to influence the development of autism disorders, pinpointing why they happen presents a formidable challenge. But in their research together, Veenstra-VanderWeele and Blakely look at it differently: with so many potential factors at play, maybe changing only one might make a big difference in figuring out this mysterious malady that affects 1.5 million people in America. — ELIZABETH OLDER



Chase Wright, shown here with his grandparents, Woody and Lynda Wright, was diagnosed at Vanderbilt with high-functioning Asperger's syndrome, an autism spectrum disorder. Chase was adopted by the Wrights in August 2007.



be open to renewal at recurring points, holds some promise, she thinks.

"You can always get better," she observes. "There's just a question of how much."

For now, Pandey says her family's daily life "has a kind of rhythm to it."

"Our big focus is happy and healthy," she says.

Lynda Wright struggles with the more subtle end of the autism spectrum. The grandson she and her husband, Woody, adopted was diagnosed by Vanderbilt doctors as having high-functioning Asperger's after a rough start in school.

"I had never heard of it," says Wright,

who had sought medical help previously and was told Chase had an attention disorder.

The Portland, Tenn., resident says sometimes the social interaction problems associated with Asperger's have been difficult to untangle from what's just normal for a growing boy.

"It was hard for us to decipher if he was being a normal 8-year-old or if there was something causing him to behave that way," she recalls.

While Chase did not react well to taking antidepressants, Wright says other medication has helped him function better.

"There's a definite reason for him to have medication," she says.

When he doesn't have medication, "It's so obvious," she explains. "He's doing well with it."

Wright has been pleased with the assessments and accommodations Chase, now 11, has received in the Sumner County school system, but she is hoping to find some family counseling to learn more about how to support her grandson now and into adulthood.

"I'm concerned about the future," says Wright. "He'll have to have some kind of special education or training for what he wants to do." **VM**

Vanderbilt supporter gives from her heart

Longtime local philanthropist Annette Eskind says medicine has been a touchstone throughout her life. From her graduate school days in Boston studying how families react when a child has a fatal illness to her years as a case worker at Nashville's Jewish Family Service, where she helped resettle Jewish physicians from what was then the Soviet Union, "Somehow, medicine has come into it," says Eskind, who recently turned 80. Even the Eskind grandchildren have inherited the interest in medicine along with a loyalty to Vanderbilt. Sons Jeffrey and Steven served residencies here. This fall, a grandson will enter Vanderbilt University School of Medicine.

Eskind and her late husband, Irwin Eskind, M.D., often chose medical causes to support. She will receive the Vanderbilt Medical Alumni Association's Distinguished Service Award in October in recognition of her work supporting the Medical Center. She's a reluctant recipient.

"My immediate reaction was this community has been more than generous to me," she said. But with repeated entreaty, and a promise that no speech had to be made – "I despise, despise public speaking" – she relented.

Support of education hasn't been far behind medicine in Eskind's life. As a member of the Metropolitan Nashville Public School Board for nine years, she campaigned for school nurses. She started a "wild crusade" for kindergarten in public schools some 50 years ago when she went to register her older son and found there was none. She founded the Nashville Public Education Foundation to support the professional development of public school teachers and administrators.

"I feel like somehow I started a little bubble in the pot for some of these things to happen," she says modestly.

Her interest in Vanderbilt's Kennedy Center, where she was the founding chair of the advisory board, fits neatly into the profile. Having a granddaughter – the youngest of five grandchildren – with learning issues only added to that, she says.

"I'm a great one for collaboration," Eskind observes, noting how the Kennedy Center includes faculty members and investigators across the disciplines pursuing clinical and research answers for developmental disorders.

"This is not an isolated thing," says Eskind, who easily puts herself in the place of patients and their



families looking for assistance. Last year she endowed the Annette Schaffer Eskind Chair; Kennedy Center Director Pat Levitt, Ph.D., is the first to hold it.

Eskind says she likes to lend support to "something that is very much in my heart." In 1994, she and her husband enjoyed seeing the completion of the Annette and Irwin Eskind Biomedical Library. Then, they turned their interest to diabetes. After years of visiting multiple doctors with Irwin, who died in 2005 from complications of diabetes, she told him, "I want it all in one building for patients with diabetes." He agreed and the care-integrated Vanderbilt-Eskind Diabetes Clinic was born.

"Irwin never saw the diabetes center completed," she says of her husband, who graduated from Vanderbilt University School

of Medicine and returned home after advanced study in Boston to establish his practice and teach medical students at his alma mater.

"The diabetes center – it was personal and important, something that was needed and was right," she explains.

"Once I do something and I feel good about the people there, I don't drive them crazy," she says. But she still enjoys visiting the Diabetes Clinic every few months "to get caught up," she says. She's especially proud of the children's area there, and was instrumental in the addition of an outreach program to Nashville's Hispanic population.

"The waiting room is wonderful," she explains. "I'm a common sense person," Eskind observes, the Boston lilt still evident when she talks.

"I've been fortunate," she says. "I've been lucky."

— ELIZABETH OLDER

Teaching the Mind

WRITTEN BY **LYNNE HUTCHISON**
PHOTOGRAPHY BY **NEIL BRAKE**

We all know the old saw about how the more things change, the more they stay the same. In medical education, where change is constant, staying the same might seem old fashioned. But for Vanderbilt Department of Psychiatry faculty, it's part of the job to pursue the newest science while still facing basic human truths. "Teaching psychiatry will change and remain the same," says Catherine Fuchs, M.D., vice chair for Education in the Department of Psychiatry. "As there's more neuroscience and neuro-imaging, there will be more importance to understanding the science. But we'll never lose the need to teach people how to deal with their reactions to patients with mental illness."

Fuchs received her B.A. ('78), M.D. ('82), and residency training in child and adolescent psychiatry at Vanderbilt, making her the ideal person to assess how teaching psychiatry at Vanderbilt has changed – and stayed the same.

According to Fuchs, Vanderbilt psychiatry faculty focused on psychodynamic and analytic theory when she was a student. That has changed on her watch.

"My goal is for medical students to recognize the complexity of the brain," she says. "People come to psychiatry thinking it's behaviors rather than illness. I teach students to get excited about the brain, to recognize the complexity of psychiatry and to use critical thinking skills."

Fuchs credits department chair Stephan Heckers, M.D., for other positive changes in psychiatry education. These include incorporating the Master Clinical Teacher program and balancing clinical science and psychotherapy with education and research.

The Master Clinical Teacher program reviews the core psychiatry skill

set and ensures that it meshes with other disciplines. This pedagogical cooperation creates an overarching knowledge that covers all aspects of medical education.

"We have topics that we expect the students to know by the time they finish their rotation," says Fuchs, a Master Clinical Teacher and the winner of the 2008 Shovel Award (given by the medical students to the year's best teacher).

In addition, psychiatry faculty have a core group of students they work with during the first and third years. In the third year, every student has



Catherine Fuchs, M.D., was chosen by Vanderbilt medical students to receive the 2008 Shovel Award for excellence in teaching. Her goal – getting students to recognize the complexity of the brain.

Physician, heal thyself

a mentor and writes reflections on their experience.

Another change since the 1970s is close student interaction with chronically ill patients, beginning the very first semester. “They get introduced to patient care early, but it’s not shadowing, it’s going to the home of the patient and learning the impact illness has on their lives,” Fuchs says. “Our goal is that they’ll be thinking about the total person and not just disease.”

While the number of Vanderbilt psychiatry residents has ranged from two to seven a year, “our goal is to have more,” Fuchs says. “But students struggle with the perception that they’ll have to give up medicine [if they go into psychiatry]. In reality, as a psychiatrist, you have to know medicine just as well.”

Another challenge lies in teaching students to recognize their reactions to a patient and how that reaction can affect care. “Some people are very uncomfortable with the illnesses we treat,” Fuchs says. “A psychotic person doesn’t reason well. It creates significant frustrations on the part of the student. We try to help them see how the disease affects behavior and to help them be nonjudgmental.”

Fourth-year resident Cory Vogt-Savoie, who received her M.D. from Vanderbilt and will start a fellowship in child and adolescent psychiatry in August, has experienced this challenge first hand. “A lot of times patients are anxious, nervous, depressed – it stirs up a lot of feelings,” she says. “It’s hard to understand when people are psychotic. If students are afraid of the patients, they can be afraid of the field.”

Despite these challenges, Savoie says there is one thing that will never change: “It’s the relationships and how you’re able to help the whole person. Sometimes it’s the simplest thing – just sitting with a person and they know you care. Those are the most rewarding times – when a patient smiles or says thank you.” **VM**

Doctor A got three hours sleep, has heartburn from McDonald’s and is facing a nasty divorce. Doctor B is in shape from five-mile runs, zaps stress by playing violin and meditates daily.

It’s 3 a.m. in the Emergency Department. Which doctor would you rather have?

The Vanderbilt School of Medicine Student Wellness Program is answering that question. Taking a cue from the proverb “Physician, heal thyself,” the Wellness Program is teaching future doctors to take better care of themselves so they can take better care of their patients.

“If you believe the data from other medical schools who’ve studied the mental health of students, becoming a medical student places one at risk for depression, alcoholism and anxiety disorders,” says Scott Rodgers, M.D., MD’94, Vanderbilt’s associate dean for Medical Student Affairs and the Wellness Program faculty adviser.

“I worry about first-year students in particular. They find themselves surrounded by brilliant people, and the amount of material they need to learn is huge. They have to become very efficient managing time so they can survive. Third year is also stressful. Students are working in the hospital, taking call, being scrutinized. They need to learn positive ways of coping.”

The Vanderbilt Student Wellness Program helps students thrive through three initiatives: the Advisory Colleges, the Student Wellness Committee and VMS Live.

The year-old Advisory Colleges, named for VUSM deans Steven Gabbe, Canby Robinson, Randolph Batson and John Chapman, allow 200 first- and second-year students to connect with and learn from faculty and upperclassmen who model a healthy lifestyle. The College Cup debuted in March, with colleges competing in swimming, basketball, running, trivia and an Iron Chef cook-off.

Seven student leaders comprise the Student Wellness Committee, along with 50 student volunteers and several faculty advisers. Third-year student Brian Drolet, who masterminded the unique program model, says the program is based on the five areas of wellness – intellectual/professional, physical, emotional/spiritual, interpersonal and environmental. The committee sponsors activities that promote these five aspects, including the popular Commodore Challenge. For a month, students log all physical activity and get points and prizes for walking, running, avoiding fast food, not smoking or drinking.

VMS Live allows students to reflect on themselves and the life they would like to lead. Through a series of workshops, students move with a life coach toward the goal of providing loving and compassionate patient care.

An intriguing fact surfaced in recent surveys: Many students chose to come to VUSM because of its friendly environment and focus on wellness. “Students say this is what makes Vanderbilt so special,” Rodgers explains. “Community and family have been a part of our fabric for decades. We’ve always been known as the school that promotes student well-being, but we’re strengthening that reputation.”

— LYNNE HUTCHISON

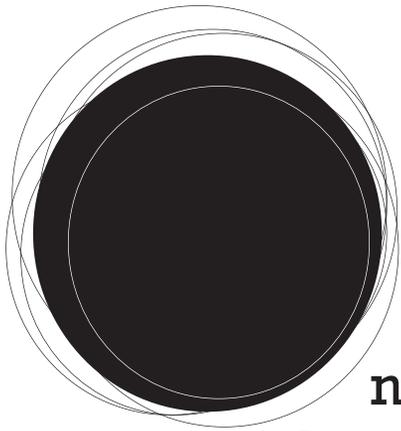


THE BLACK HOLE OF DEPRESSION

MEDICATION AND THERAPY
HELP PATIENTS FIND THEIR WAY OUT

WRITTEN BY **PAUL GOVERN**
PHOTOGRAPHY BY **DANIEL PROCTOR/GETTY**





ne of the
common descriptions
given by patients with
depression is of an
oppressive weight, like a
wet blanket over the body.
It's hard to move, hard to
motivate, everything seems
insurmountable.

"I like to say that depressed people are the strongest people in the world," said depression expert Richard Shelton, M.D., referring to the way that everyday challenges are magnified in any episode of depression.

Depressed people have a down mood, have lost their usual interest in things, are fatigued and undergo cognitive changes involving hopelessness, guilt and, in many cases, thoughts of suicide. From one patient to the next, some of the common signs of depression are opposed: one patient will get too little sleep, another too much sleep; one will undergo loss of appetite, another weight gain; one will have an over-reactive, irritable down mood, another a stable down mood. The grief reaction is indistinguishable from depression, and only in the absence of a recent enough cause for normal grief do the symptoms of depression actually spell depression.

Talking with Shelton, you get the impression that if you need treatment for clinical depression, your odds of being appreciably helped to recovery would depend inordinately on who your doctor or psychotherapist was. The proven treatments for moderate to severe depression, which include medication and psychotherapy, are considered to have an aggregate success rate approaching 85 percent. But that's the current optimum in controlled clinical research settings, not the somewhat less hopeful actual American experience. Shelton, James G. Blakemore Research Professor of Psychiatry, says that more patients with depression could be helped if their treating clinician would apply medication more assertively or use a highly validated form of psychotherapy called cognitive behavioral therapy (CBT).

Another Vanderbilt depression expert, Steven Hollon, Ph.D., professor of Psychology, says the drugs for depression are so good that people who manage to

get into treatment stand to be helped regardless of their clinician's relative level of expertise. Like Shelton, however, Hollon prefers psychotherapy for depression.

Antidepressant medications are palliative, seen as controlling symptoms, not correcting underlying causes.

"I believe cognitive psychotherapy solves the underlying causes of depression," Hollon said.

When an episode of depression is severe and uncontrolled, it can present yet more disturbing aspects.

"Never let it be doubted that depression, in its extreme form, is madness," wrote novelist William Styron, who at 60 suffered his first bout with depression, a virulent episode that was mistreated at first. For Styron, the onset of depression brought "panic and dislocation, and a sense that my thought processes were being engulfed by a toxic and unnamable tide that obliterated any enjoyable response to the living world."

Distinguished from more commonly diagnosed unipolar depression is bipolar disorder, which is marked by contrasting cycles of depression and mania. Robert Hennessy Jr., who currently receives outpatient treatment at Vanderbilt, was diagnosed more than 25 years ago with bipolar disorder. Hennessy attested to the energy-sapping nature of depression, and he spoke about some of the disturbing cognitive effects of his disorder.

"Changing mood swings will change your reality, eventually.

"If you get too depressed, you can lose memory of things you've done."

Genetics, abnormal brain chemistry, life events as contributors – depression has it all, and for Hollon and Shelton no other research topic is quite as absorbing.

"As a researcher, it puts you at the intersection of biology, psychology, sociology. What could be better," Hollon said.

"It's about as diverse and complex an area for research as there is," Shelton said.

Depression will befall 15 percent of us at least once during our lifetime. According to the World Health

Depression is eminently treatable and the available drugs are excellent, but too many physicians appear to mistakenly believe that drugs constitute the whole armamentarium for this disorder.

Organization, it's the world's leading cause of disability and the fourth leading contributor to the global burden of disease. Women are twice as likely as men to undergo depression, and if you've had a previous episode of depression or if you have a biological parent who has had depression, your chances of depression are three to five times greater than the general adult population. Abuse in childhood raises the risk of depression later on; in fact, socially related stressors such as abuse are particularly likely to produce depression.

According to Hollon, before drugs to treat the disorder began to emerge in the middle of the last century, doctors generally didn't bother asking patients about their mood because nothing worked to control clinical depression.

For the past two decades, quite safe and effective antidepressant medications have been available. And primary care physicians have grown fully accustomed to prescribing them. According to Shelton, less than 2 percent of U.S. patients in treatment for depression receive evidence-based CBT.

Neurotransmitters are chemicals that aid communication between neurons and other cells. Among other actions, antidepressant medications block re-absorption of certain neurotransmitters, leaving these chemicals available in greater quantities to send a stronger signal between cells and help normalize mood. Popular for depression are SSRIs, or selective serotonin reuptake inhibitors. Well-known brand names include Prozac, Zoloft and Paxil. Shelton explained that SSRIs help control anxiety but may not be as effective for low energy and motivation; these symptoms may be helped with medicines acting on

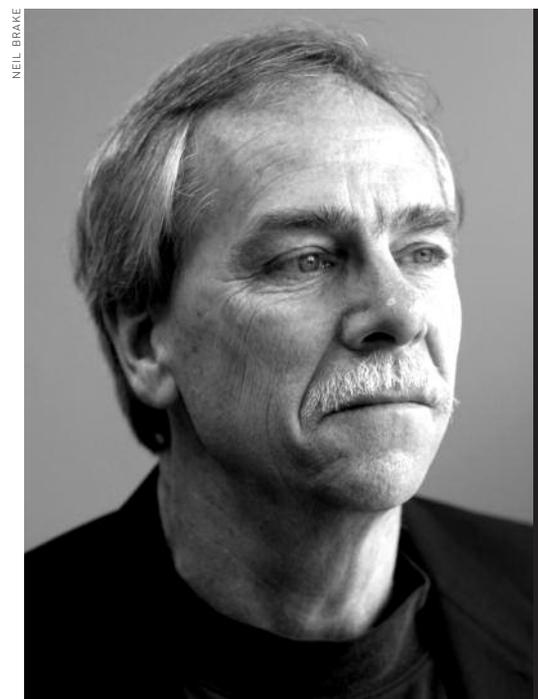
the brain chemical norepinephrine, such as bupropion (brand name Wellbutrin). Some drugs combine actions on serotonin and norepinephrine, such as venlafaxine or duloxetine (brand names Effexor XR and Cymbalta).

Basing his views partly on findings from his own research, Hollon says evidence-based psychotherapy for depression is unhelpfully overshadowed by the drug cabinet, underappreciated by physicians and inadequately understood even by most practicing psychotherapists.

Depression is eminently treatable and the available drugs are excellent, both researchers say, but too many physicians appear to mistakenly believe that drugs constitute the whole armamentarium for this disorder.

An April 2005 study in the *Archives of General Psychiatry*, from a team of investigators at Vanderbilt and the University of Pennsylvania, took a close look at the use of medications vs. CBT. The study, with both Shelton and Hollon participating, showed that a 16-week course of cognitive therapy for moderate to severe depression is as effective, although a bit slower than, antidepressant medications. Further, it showed that cognitive therapy has "an enduring effect that extends beyond the end of treatment. It seems to be as effective as keeping patients on medication."

Of 240 patients with moderate to severe depression, 120 were given antidepressant medications, 60 others were given a pill placebo, and the remaining 60 were given cognitive therapy. At 16 weeks, the response rates were 58 percent for both cognitive therapy and medications (the placebo had measured a relatively low response rate and was stopped at week



● **Stephen Hollon, Ph.D., believes cognitive psychotherapy solves the underlying causes of depression.**

eight). In a subsequent 12-month phase of the study, patients who had responded to cognitive therapy were discontinued from treatment (but were not prevented from receiving up to three booster sessions), while from among the patients who had responded to medications, half continued on medication and half were weaned to a placebo. After 12 months, the patients withdrawn from cognitive therapy were no more likely to have relapsed than patients who continued on medication. Both groups were significantly less likely to have relapsed than patients weaned from medication to placebo.

The results overturn ingrained notions about the relative efficacy of psychotherapy for treating depression. It's still unclear how long it will take for these



DEAN DIXON

● **Richard Shelton, M.D., believes the advantage of cognitive therapy, beyond its avoidance of side effects, is that patients learn self-management techniques that continue to be protective beyond the treatment phase.**

findings to be heeded by physicians, psychotherapists, consumers and payers.

According to Shelton, the advantage of cognitive therapy, beyond its avoidance of side effects, is that patients learn self-management techniques that continue to be protective beyond the treatment phase. "It has a preventive effect because it targets things that set off depression," he said.

For depression, Hollon will generally propose 15 to 20 sessions. CBT deals in concrete terms, targeting maladaptive behaviors and, in the case of depression, correcting the distorting influence of negative thoughts and beliefs. In a first session, Hollon will ask about a patient's major concerns and begin to identify cognitive and behavioral dimensions of the patient's experience with depression.

"If a woman, early on, brings up a fight with her daughter, for example, I'll ask what was said, what she did in response, what she was thinking. Now we've got some beliefs and behaviors before us. I'll ask how she would like to behave with her daughter. I'll suggest that we practice those behaviors in our sessions.

Before long, I'll suggest that we examine any persistent beliefs that may be involved. 'What do you mean by saying you're a bad mother? What do you mean by saying that your daughter is bad?'

"If you're out of work, I'll ask you to consider what would be needed for you to get work, and I'll begin testing the validity of any beliefs that may be getting in the way of your seeking work." Within two or three sessions, therapist and patient can be under way with behaviors needed to improve the situation, and within six to eight sessions they can be under way with overturning any beliefs that may be standing in the way of a solution. "I'll be asking: What's the evidence for the belief? What are some of the possible alternative views? What are the possible results when we consider alternate beliefs?" Hollon said.

In as many as a third of the patients with depression whom Hollon sees, the disorder appears connected to complex, very longstanding behavioral issues, and in those cases he will continue with CBT but also borrow elements from older forms of psychotherapy, including rooting

through childhood and early established personal beliefs. In very difficult cases, it can take as long as a year or two for CBT to succeed.

CBT has its limits. According to Hollon, it's less apt to be successful for patients with depression in the top quartile of severity. If a patient doesn't respond within eight weeks, he'll usually recommend augmenting CBT with antidepressant medications. He says he would never try to talk a patient with bipolar disorder off medication, and for anyone who's depressed and psychotic it's best to include medication at the start.

Other empirically supported psychotherapies for depression include interpersonal psychotherapy and behavioral activation.

Both Hollon and Shelton voice some doubt that many of the psychotherapists who claim to provide CBT know how to apply the treatment properly.

According to Hollon, 30 percent of psychotherapists today describe themselves as working with CBT.

All learning changes the brain, and

beyond that sort of generality not much is known about how CBT works. As brain imaging continues to bear more fruit, Hollon is hopeful that explanations will emerge.

“In 10 years we’ll know a lot more than we do now,” he said.

“A significant number of people aren’t helped by the available therapies,” Shelton said. “We need new treatments,

and we need better matching of therapies to individual patients. For example, who will benefit best from psychotherapy and who will benefit best from drugs?”

Among other likely developments, he looks forward to inexpensive genetic tests to help predict responses to medication and to distinguish unipolar depression from bipolar disorder.

Robert Hennessy, the Vanderbilt

patient with bipolar disorder, says if you’re depressed it’s important to seek help.

“In addition to seeing a psychiatrist or therapist, get hooked up with one of the national patient organizations or with a state mental health organization so they can give you a hand understanding your illness better.” **VM**

Psychiatric Hospital serves varied patient base

Much more than bricks and glass, the Vanderbilt Psychiatric Hospital is a critical resource not just for its patients, but for an entire region struggling to deal with the difficulties of mental illness.

VPH, as it’s known, is unique. It’s the only inpatient facility in Middle Tennessee open to all psychiatric patients, including children and those on TennCare, the state’s Medicaid-managed program that provides health coverage for 1.2 million low income children, pregnant women and disabled Tennesseans. Many mental health providers in the community have honed their skills there, counting on its commitment to evidence-based medicine and teaching.

That commitment is evident in the diverse stream of patients entering the hospital’s doors.

“There are a number of different ways that folks can get admitted,” said Ann Cross, CEO and director of patient services. Patients come via Vanderbilt’s Emergency Department, are referred by local physicians and community mental health centers, or are transferred from hospitals which don’t have psychiatric units or don’t accept TennCare patients. Others just “show up in the lobby,” she said.

The hospital’s services are tailored to serve that varied patient base.

In addition to child and adolescent units, four adult programs specialize in mood and thought disorders, such as depression, anxiety, post-traumatic

stress disorders, schizophrenia, bipolar disorder and psychoses. Many patients have been hospitalized before.

“The biggest misconception is that people get well here,” Cross explained. “You don’t get well here, because recovery from mental illness is a long-term proposition. We can address the acute situation, we can give you a lot of tools to manage, and we can connect you with good outpatient follow-up, but you’re not going to get well here.”

That’s hard for families and patients to understand, and accept.

“They desperately want us to cut something out or give the pill or whatever it is that happens in hospitals to make this all go away,” Cross said. “It doesn’t work that way.

“That’s probably the most difficult thing, because it tends to eat at people’s hope. There is a lot of hope in mental illness, but it’s hope with the realization that it’s not a quick fix.”

That hope grows through VPH’s evolving research programs, treatment options and staff expertise.

The electroconvulsive therapy program was restarted in December after an 11-year hiatus. The Vanderbilt Institute for the Treatment of Addiction (VITA), a dual-diagnosis program for patients with substance abuse and psychiatric issues, offers medically supervised detoxification.

And like other areas of health care, the average length of stay in the psychiatric hospital is shrinking – now just seven days.

People still think about patients coming to psychiatric hospitals and staying for months or years,” Cross said. “We can keep patients only as long as they meet ‘medical necessity’ criteria. That means they’re dangerous to themselves or others ... suicidal, homicidal or so psychotic that they’re unable to care for themselves or protect themselves.”

She recalls a patient from early in her career who took a sewing machine, patterns and bolts of fabric to the hospital with her.

“Today, people bring an overnight bag, and that’s about it,” Cross said. “The sewing machine days are long gone.”

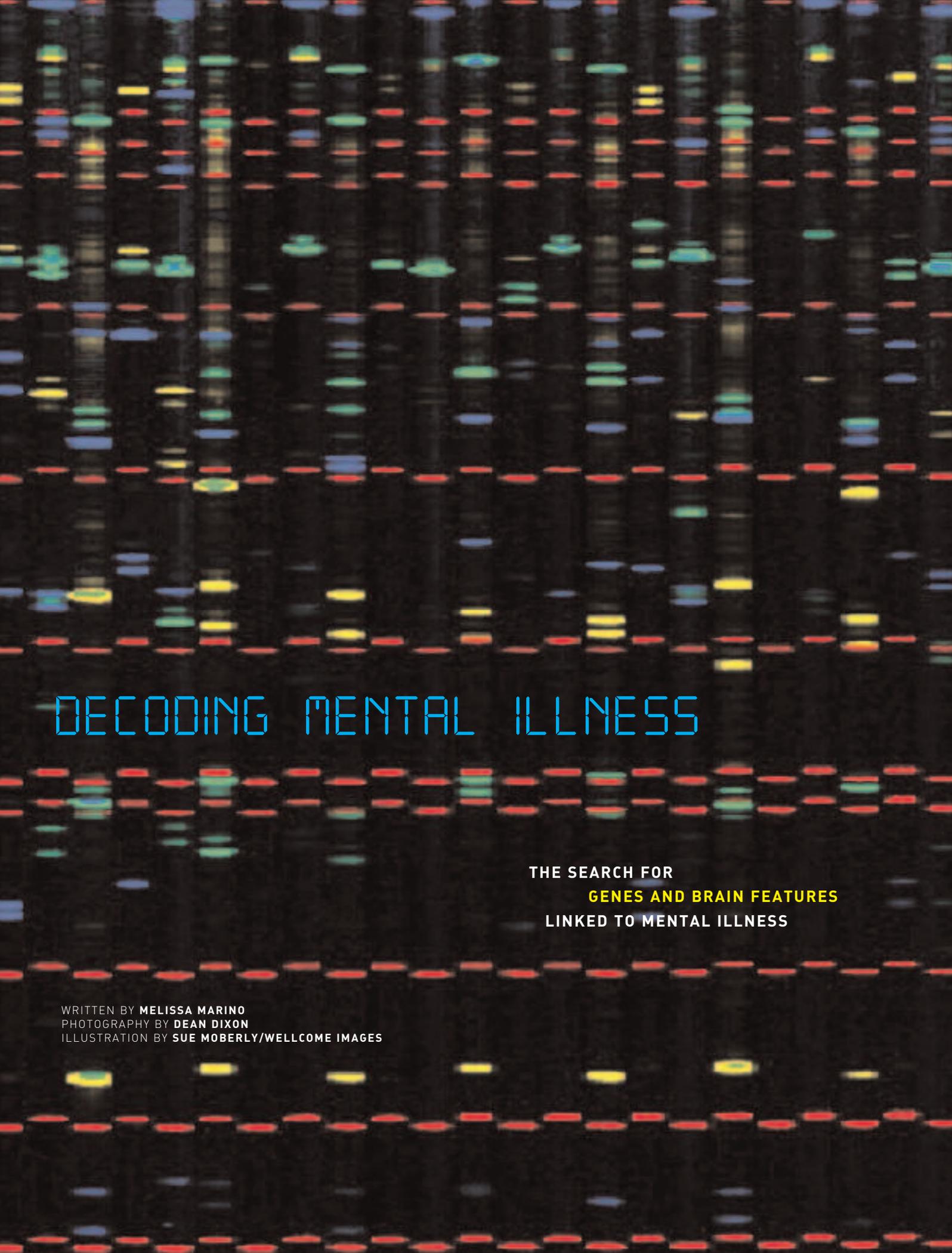
When it’s time for patients to be discharged, the hospital must work closely with community mental health centers to arrange treatment. And that’s an increasingly harder job.

“When it’s time to discharge patients, things get dicier,” Cross said. “They may no longer qualify for inpatient treatment, but they’re not yet ready to care for themselves on their own. So we wait for some kind of supervised housing, assisted living or nursing home placement.”

Cross says that’s become more and more difficult in Tennessee since many facilities won’t accept patients who have a mental illness because of their liability.

“The number of beds just does not meet the demand. If there’s a mental health crisis in our state right now, that would be it.”

— LAURIE E. HOLLOWAY



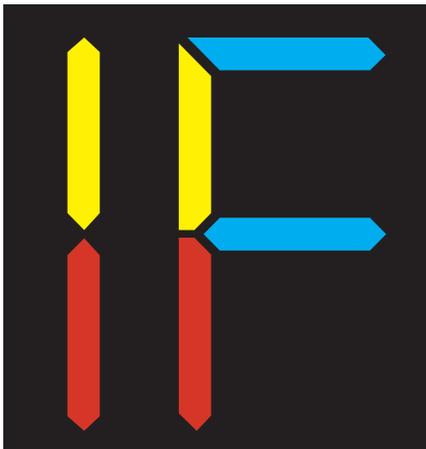
DECODING MENTAL ILLNESS

THE SEARCH FOR
GENES AND BRAIN FEATURES
LINKED TO MENTAL ILLNESS

WRITTEN BY **MELISSA MARINO**
PHOTOGRAPHY BY **DEAN DIXON**
ILLUSTRATION BY **SUE MOBERLY/WELLCOME IMAGES**

The phenotype/genotype team, left to right:
Herbert Meltzer, M.D., Stephan Heckers, M.D.,
and Richard Shelton, M.D.





you come into an ER with chest pain and shortness of breath – a suspected heart attack – a diagnostic engine fires.

From a tube of your blood, the lab runs a quick panel of tests that can detect the telltale molecular markers of a heart attack. Electrodes applied to your chest may reveal an irregular heart rhythm. And imaging scans might show if there is a dangerous blockage of one of your arteries.

These tests provide clinicians evidence of the medical problem at hand and, with the results, the physician has a better grasp on the necessary course of treatment.

But for a patient with symptoms of mental illness – mood changes, fatigue, insomnia, hallucinations, delusions, lack of interest in usual activities – there are no scans, no blood tests that can aid in the psychiatric evaluation. Diagnosis and choice of treatment rely solely on clinical symptoms and medical history.

A new project at Vanderbilt Medical Center hopes to change that by applying the tools of neuroscience research – specifically, neuroimaging and genetics – to

identify “tests” that may aid in the diagnosis and treatment of psychiatric illness.

Stephan Heckers, M.D., chair of Psychiatry, and colleagues have begun a five-year research initiative that will assemble a large database of clinical and biological information on patients with mental illness. The information in the database will ultimately include an in-depth evaluation of the patient’s symptoms, psychiatric history and their response to treatments (their “phenotype”); an analysis of genetic variations they carry that might be linked to mental illness (their “genotype”); and an assessment of possible brain anomalies that might predict a patient’s risk of psychiatric illness.

Working with Richard Shelton, M.D., a psychiatrist who specializes in depression and bipolar disorder, and Herbert Meltzer, M.D., a leader in the field of schizophrenia research, the investigators hope to hasten the translation of neuroscience research into clinical practice.

SEEKING ANSWERS

Genetic testing and imaging have been embraced as clinical decision-making tools by many medical fields – oncology, cardiology, and infectious disease, for example. But not by psychiatry, says Heckers.

“There’s not a single approved test,” he notes.

With the new psychiatric genotype-phenotype project, Heckers hopes to turn the tide and bring psychiatric evaluation into line with other medical specialties.

Over the next five years, they hope to enroll at least 1,000 people in the study.

This will include patients with major depression, bipolar disorder or schizophrenia, as well as unaffected “control” subjects. Each person in the study will undergo a comprehensive clinical assessment, brain imaging, and collection of biological samples (e.g., blood and urine) for the analysis of genetic variations and gene expression.

The idea is not to search for genes associated with mental illness per se, but to help identify those that could be used as markers of disease risk or genetic factors that might be associated with specific symptoms or characteristics of psychiatric illness, such as treatment response or side effects.

“We will be looking at genes that might predict a type of abnormality or structural change in the brain or...that relate to cognitive impairment – which is the aspect of schizophrenia and perhaps bipolar disorder that has the biggest effect on function in everyday life,” says Meltzer. “The beauty of this approach is that we can focus on each of the major components of the three disorders. We expect to find that some of them overlap.”

For example, since Heckers’ research interest is a specific type of memory impairment in schizophrenia, the genotype-phenotype initiative should allow him to specifically assess genetic factors that affect that particular form of memory.

Meltzer, who has used a similar strategy in his schizophrenia research, thinks that the genotype-phenotype approach is “an extremely valuable strategy for asking and answering some of the key questions in our field,” including questions that may not even be apparent now, but will emerge from new knowledge, both preclinical and

clinical. The information and genetic material being collected in this project will be available for generations of Vanderbilt investigators and their collaborators.

Additionally, Meltzer adds, studying these disorders side-by-side may also reveal the biological basis of their common features – which has been difficult to examine because these illnesses have traditionally been studied separately.

The investigators believe that information gleaned from the study will not only offer important research insights, but it will also directly and immediately improve the care of Vanderbilt psychiatric patients.

“We will be doing this in patients we are taking care of – outpatients and inpatients,” Heckers notes. This allows for a rapid feedback of the information obtained from the thorough clinical assessment to the clinicians directly caring for the patient.

“This is directly leveraging research to the direct benefit of the participants,” says Shelton. The thorough clinical assessment done for the research study may immediately offer important clues to the root of the patient’s problem – clues that may be missed by a standard evaluation.

In Shelton’s area of expertise, depression, he has seen cases where diagnoses are inadequate or patently wrong. And, one patient with depression may have wildly different symptoms than another patient diagnosed with the same disorder.

“People tend to come to depressive disorders as if it is a single entity, like it’s a ‘melanoma,’ for example,” he says. “In fact, it’s more like ‘cancer.’”

The research-based assessment will allow the investigators to better classify

Basic science researchers in Vanderbilt’s Department of Psychiatry are making headway toward finding markers and predictors of psychiatric disorders.

While analyzing gene expression in postmortem brain samples, Karoly Mirnics, M.D., associate professor of Psychiatry, identified a surprising immune system activation in the brains of people with autism and schizophrenia, suggesting that insults that spark a mother’s immune system – such as a maternal infection – might contribute to clinical features of the illnesses later in life.

He and colleagues at the California Institute of Technology recently confirmed this in mice, finding that a “fake infection” midway through gestation causes behavioral and tissue abnormalities reminiscent of schizophrenia and autism in the offspring.

Their findings point to the important – and often overlooked – role of environmental factors on the development of psychiatric illnesses. Knowing whether a mother has had an infection during pregnancy might one day allow physicians to predict the child’s later risk of developing a psychiatric illness.

“We know that schizophrenia and many of these disorders have a strong genetic component,” Mirnics notes. “But it’s not all about genetics. There’s also an environmental component to it.”

Another researcher, Christine Konradi, Ph.D., professor of Psychiatry and Pharmacology, has found a striking decrease in the expression of a particular set of genes in bipolar brains –

PSYCHIATRY RESEARCH GOES BACK TO BASICS

genes involved in making the cellular “energy” known as ATP.

“I liken it to your brain running on empty,” she says.

But since it is impossible to measure these changes in a living person’s brain, Konradi has found another readily available tissue that could be used for diagnostic purposes: white blood cells.

Konradi found that when the blood cells were deprived of glucose — the sugar converted by cells into energy — the cells of bipolar patients were unable to “turn up” the expression of genes critical to energy production, a response that the cells of control subjects readily exhibited.

“That indicates that these cells do not adjust to stress in a healthy way. Interestingly, in patients, stress can trigger bipolar episodes and it tends to worsen the disorder,” she explains. “In a way, we recreated, in a cellular model, what we see in patients.”

Konradi hopes that this finding will lead to a blood test for bipolar disorder that might indicate the most effective course of treatment for individual patients.

But, she cautions, “A blood test will have only limited impact for a patient unless it can be linked to a particular therapy.”

— MELISSA MARINO



WITH THE NEW PSYCHIATRIC GENOTYPE-PHENOTYPE PROJECT, STEPHAN HECKERS, M.D., HOPES TO TURN THE TIDE AND BRING PSYCHIATRIC EVALUATION INTO LINE WITH OTHER MEDICAL SPECIALTIES.

patients according to their specific diagnosis, separating patients into subgroups based on their phenotypes. And from this improved classification, the investigators hope to delve deeper into the genetic and neurological basis of the different phenotypes.

Not only could such a strategy improve diagnosis, but having a comprehensive clinical assessment and genetic and neurological information about an individual patient might point to the most effective treatments for that patient.

Meltzer's work has already identified genes that distinguish schizophrenia patients that respond to the standard therapies, or "first generation anti-psychotic drugs," from those who do not respond, a group that accounts for about 30 percent of schizophrenic patients.

For depression, says Shelton, "We have lots of treatments available, but we

don't know who will respond to which one." Therapies are given by trial and error – if drug A doesn't work, try drug B, or add drug C. "We need to do a better job than that...a better job of matching treatment to the patient, and I think this (project) is a great opportunity to do that," he says.

REKINDLING A SENSE OF WONDER

Beyond the benefits to patients and their clinical care, Heckers thinks that this research initiative could also enrich the training experience for medical students and residents interested in psychiatry. Right now, about 80 percent of these medical students enter psychiatry as a clinical practice only. Very few conduct research.

"We are already doing well in training. This is a solid program, but we're not really different from many other training programs," he says.

Heckers hopes that this research initiative will "rekindle the fundamental sense of wonder and enthusiasm for understanding" the causes and course of mental illness – and ultimately attract more students into the field and into psychiatry research.

Ultimately, the researchers hope that more knowledge about the science of mental illness will help to de-mystify and de-stigmatize these disorders in society.

"That is why research is such an important force in psychiatry," says Shelton. "To not only help us as clinicians, but for society at large, to fundamentally change how we deal with mental illness." **VM**

President's Corner

The Canby Robinson Society is celebrating its 30th year! It was created in 1978 to honor and encourage those who contribute to furthering education, research and patient care at Vanderbilt Medical Center. Through your generosity, the Canby Robinson Society has become the largest donor society at Vanderbilt University. We currently have more than 2,400 members.

Gifts to the Canby Robinson Society can be unrestricted or restricted. The unrestricted gifts provide full tuition and stipends for our CRS scholars. In the 2007-2008 year there were 19 M.D. scholars and 16 M.D./Ph.D. scholars. The M.D./Ph.D. program takes between six and seven years to complete. It is through CRS scholarships that we are attracting the

best and the brightest minds to Vanderbilt Medical School. Restricted gifts fund specific departments and programs at the Medical Center.

We have had a very busy spring. In March we had Match Day, the day our fourth-year medical students learn where they will be going next year to do their residency programs. On May 8, the prestigious CRS award was presented to Jonathan Andrew Kropski, a fourth-year student who was voted by his 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. May was also the month that we celebrated the Canby Robinson Society's 30th year at our annual dinner.

We have been very fortunate to have had Dr. Lonnie Burnett as our president

for the past two years. We thank him for his leadership and commitment.

Thanks to each of you for your support. You are the reason Vanderbilt Medical Center has grown to be one of the top rated medical centers in the country.



Kitty Murfree

President

Canby Robinson Society

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/

Personal experience triggers Yarbrough's generosity

Jon Yarbrough knows luck exists in the world, both good and bad. Creating a video gaming empire, he has been very successful through other people playing the odds. However, he also knows the flip side to good luck. Someone very



Jon Yarbrough

close to him – his sister, Karen – has struggled with schizophrenia most of her adult life.

Yarbrough is now using his success to help Vanderbilt's Department of Psychiatry continue its work and research in fighting schizophrenia and other mental illnesses.

His sister has been treated by Vanderbilt's Stephan Heckers, M.D., chair of the Department of Psychiatry.

"I am very passionate about psychiatry, and schizophrenia in particular, because of my sister," Yarbrough said. "She is doing wonderfully since being seen by Dr. Heckers."

Yarbrough understands all too well the long road of recovery with schizophrenia. He has watched his sister suffer throughout her life before receiving the correct treatment and medication.

"The Vanderbilt Psychiatry Department is the best in my opinion," Yarbrough said. "Dr. Heckers has done great things with my sister."

Yarbrough credits his sister for helping him not be discouraged in business or in life. One summer in college at Tennessee Technology University he sold books door to door. Yarbrough explained how the company would teach them that rejection and discouragement were part of the sales world, and they needed something more than themselves to keep them motivated to sell.

"I wrote 'Do it for Karen' on a piece of paper and when I would get discouraged I would pull this paper out and read it," he said. "She never quit and neither did I."

Yarbrough's current business, Video Gaming Technologies (VGT), was formed during his tenure at Tennessee Tech. He was spending time in game rooms while attending school and started competing in foosball tournaments.

During an internship at NASA in Langley, Va., Yarbrough bought a foosball table for practice while he was away from college. When he returned to

(continued on page 46)

New CRS board members bring experience, altruism to group

Six new individuals will be joining the Canby Robinson Society Board this year. The new board members, who are actively involved with Vanderbilt and the community, bring a wealth of experience and ability to the governing board of the CRS.

They are:

Andre Churchwell, M.D., assistant professor of Medicine, and associate dean for Diversity in Graduate Medical Education, graduated from Vanderbilt University with a Bachelor of Science degree in Biomedical Engineering before receiving his medical degree from Harvard Medical School. He completed his medical internship, residency and cardiology fellowship at Emory University in Atlanta.

"It is a privilege and profound honor to be asked to serve on the CRS board," he said. "Vanderbilt has such a stellar reputation of selecting the best medical students throughout the country and it is exciting to be a part of this process."

Richard Treadway, M.D., MD'64, following his graduation from Vanderbilt University School of Medicine, completed an internship at Vanderbilt and a psychiatry residency at University of North Carolina Chapel Hill.

He worked at the National Institute of Mental Health for two years, before coming back to Vanderbilt as the director of the adult psychiatry clinic. He later served as Commissioner of Mental Health for Tennessee for four years and returned to Vanderbilt as associate vice chancellor of Medical Affairs.

"When we started the CRS, it was 100 or so members," he said. "Today it has grown to 2,500. The CRS provides support for the Medical Center and supports student scholars, many of whom we would not be able to recruit without the scholarship program. The quality of the Medical Center continues to improve partly due to the widespread support of the CRS."

Lynn May graduated from Vanderbilt and went on to receive her Master of Education degree from Vanderbilt.

She taught school for several years before entering the banking industry at Third National Bank. She and her husband, Jack, later founded Nashville Bank & Trust, where Lynn retired three years ago as Senior Vice President.

"Nashville is very fortunate to have Vanderbilt Medical Center and I look forward to getting to know the dedicated volunteers of the Canby Robinson Society, and to meeting the Canby Robinson scholars," she said.

Michael S. Higgins, M.D., MD'89, professor and chair of Anesthesiology, is the medical director of Perioperative Services at Vanderbilt.



New CRS board members, left to right, Richard Treadway, M.D., Sandra Lipman, Andre Churchwell, M.D., Lynn May and Harris Gilbert. Not pictured, Michael Higgins, M.D.

Before returning to Vanderbilt, Higgins completed a fellowship in vascular and thoracic anesthesia at Johns Hopkins Hospital. He later received his Master of Public Health degree from Vanderbilt in 1998.

"I'm thrilled to be part of an organization that works to support those who invest in the Vanderbilt Medical Center's innovative programs," he said.

(continued on next page)

Members of the CRS board are given a tour of the new Vanderbilt Eye Institute by Paul Sternberg, M.D., chair of Ophthalmology and Visual Sciences and director of the VEI.



(continued from page 45)

Cookeville, he didn't have a place to store the table, so he made a deal with a local game room to use the table and to split the revenue with him.

"I was amazed at how fast the quarters racked up," he said.

Yarbrough, who graduated with a degree in industrial engineering, continued to buy other video games and eventually started VGT, one of the nation's

largest video gaming companies.

Since 1991, VGT has been supplying markets with LCD touch screen machines, stepper-reel live-draw bingo games and a revolutionary narrow-width gaming cabinet that lets facilities place two machines in the space traditionally taken by one game.

"I have been very fortunate in my life and I want to give back," he said. "I plan on giving a large portion of my wealth to

places like Vanderbilt who are working to combat schizophrenia. I want my life to mean something and I am passionate about (the treatment of) schizophrenia."

Yarbrough lives in Franklin, Tenn., with his wife, Kathy, and 7-year-old daughter, Amy. The couple's 18-year-old son, Jon Jr., is attending college at Miami University in Oxford, Ohio.

- JON COOMER

Sandra Lipman is a longtime volunteer/advocate in the Nashville community. She is past president of the Friends of the Monroe Carell Jr. Children's Hospital at Vanderbilt, and has volunteered with the Paper Sale and telethon to raise funds for Children's Hospital. She has also co-chaired Steeplechase and will be co-chairing Sunday in the Park for Friends of Warner Park next fall. She graduated from Southern Methodist University in Dallas.

"A huge part of my life is giving back to the community that has blessed me and my family," she said. "I am very excited to learn about the new research, patient care, educational programs and opportunities going on at Vanderbilt. To become personally acquainted with the faculty and students and hear from them first hand is a wonderful added bonus."

Harris Gilbert, a local attorney with Wyatt Tarrant & Combs LLP, is the past president of the Tennessee Bar Association (1994-95). He received his Bachelor of Science degree in 1952 from Yale University and his law degree in 1955 from the University of Chicago.

In 1995 the Tennessee Bar Association renamed the Pro Bono Volunteer of the Year Award in his honor.

"I am extremely interested in Vanderbilt's research programs," he said. "I am also interested in the personal relationships between the doctors at Vanderbilt, the patients and the community."

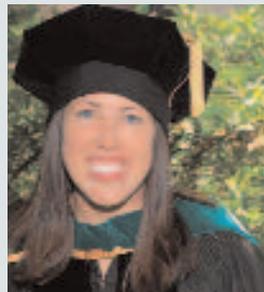
- JON COOMER

Ramsey pays it forward with scholarship

T Alan Ramsey, M.D., MD '67, knows the importance of paying it forward.

Without the generosity of others, Ramsey might not have attended Vanderbilt University School of Medicine and in turn impacted the lives of countless patients throughout his career. Now

CRS GRADS: WHERE THEY MATCHED



Laura Altom
University of Alabama
Medical Center, Surgery



Kevin Elias
Brigham & Women's
Hospital, Ob/Gyn



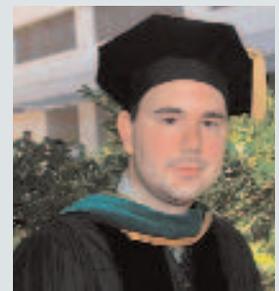
Alex Eshaghian
University of New Mexico
School of Medicine,
Medicine-preliminary



Dana Guyer
VUMC, Medicine,
Pediatrics



Diana Lemly
Massachusetts General
Hospital, Internal
Medicine, Pediatrics



William Oldham
Massachusetts General
Hospital, Internal
Medicine

partially retired, he has decided to help future physicians by funding the T. Alan Ramsey Scholarship.

"I was given assistance while attending Vanderbilt – a full tuition scholarship," he says. "There wasn't anything in writing, but there was an understanding that you should reciprocate when and if you could. This was an obligation that should be taken seriously," he said.

One of the biggest challenges facing medical students today is the high cost, according to Ramsey. "It is a tragedy if medical education is not available to capable and interested students because financial resources are limited. That is why I decided to fund the scholarship. Making money available will increase the options for some students."

Ramsey valued his education at

Vanderbilt and supports the educational mission of the school. "Vanderbilt is a relatively small medical school with a high faculty-to-student ratio," he said. "There is a lot more personal contact between instructors and students. It is an excellent medical school."

After graduating from Vanderbilt, Ramsey completed an internship in medicine at George Washington University Hospital and his residency in psychiatry at the Hospital of the University of Pennsylvania. He was chief resident for psychiatric consultation and a psychopharmacology research fellow at the University of Pennsylvania.

From 1971 to 1974 Ramsey served in the military at the U.S. Public Health Service at the Center for Studies of

(continued on page 48)

WHERE ARE THEY NOW? DANIEL CHANG, M.D.

Growing up in the Bay area of Northern California, Daniel Chang, M.D., MD'02, probably never thought he would live in Nashville.

Chang completed his undergraduate degree from University of California Berkeley and began searching for medical schools. Vanderbilt is a nationally recognized medical school, so when Chang was offered a Canby Robinson Society scholarship the decision was made.

"Attending Vanderbilt was a huge cultural change for me and certainly took some time to get used to," Chang said. "The CRS scholarship was an honor to receive and impacted my decision to attend Vanderbilt."

Attending Vanderbilt proved to be an excellent training decision that helped Chang shape his current career in emergency medicine.

"Although moving to Tennessee was a big step, I've never had any regrets," Chang said. "I felt Vanderbilt was a great place to get incredible training, both in the general medical specialties, in scientific research, and particularly getting to spend some time learning from Dr. Corey Slovis and the other faculty in the Department of Emergency Medicine."

After graduating from VUSM, Chang did a one-year preliminary medicine internship at University of Tennessee Memphis and then a three-year residency at University of Southern California in Los Angeles.

Since 2006, he has been working as an attending staff emergency department physician in Sherman Oaks, Calif.

In May Chang married his fiancée, June Kim, an art director for the Disney Corporation in Southern California. The couple has purchased their first house and enjoys traveling, fine dining and snorkeling.

- JON COOMER

Daniel Chang, M.D., with June Kim. The two were married in May.



CRS president Kitty Murfree awarded the 2008 CRS award to Jonathan Andrew Kropski. The award is given to a graduating student who possesses the intangible qualities of common sense, knowledge, thoughtfulness, personal warmth, gentleness and confidence which combine to make the "Ideal Physician," the person fellow classmates would most like to have as their personal physician.



TOMMY LAWSON

(continued from page 47)

Narcotic and Drug Abuse at the National Institute of Mental Health. He has held faculty positions at Georgetown University School of Medicine, University of Pennsylvania School of Medicine, and Washington School of Psychiatry.

Ramsey has maintained a private practice in psychiatry in Washington D.C. for many years. He and his wife enjoy cycling and with his recent retirement can enjoy this activity more. He estimates he has ridden more than 25,000 miles through Canada, Europe and the United States.

He recalls a time in the Scottish Highlands ascending a mountain in the blowing rain. A tour bus passed, and he briefly thought how comfortable the bus riders must be, but quickly realized he was experiencing the region much more intimately. "Riding is extremely enjoyable and a wonderful way to tour."

Ramsey's stepson and wife recently had their first child (the Ramseys' first grandchild), and Ramsey's wife wanted to spend more time with her granddaughter, so he took this opportunity to return to work part time. He sees patients at a Medicaid clinic in Southeast Washington that treats a large underserved population that is struggling with substance abuse problems, mental health issues and multiple medical ailments.

Ramsey is a strong proponent of universal health care. "We need to reform the medical delivery system in this country," he says. "There is no excuse that in our modern society, 47 million people have no health insurance."

He remembers a lifelong lesson from VUSM's Thomas Brittingham, M.D.

"He taught us that correct diagnoses usually are achieved by getting more and better quality information about the patient's problems," he said. "Getting detailed and relevant information up front from the patient takes time and effort, but it results in better care for the patients and increases provider efficiency. This should be a basic principle incorporated into our medical care system."

- JON COOMER

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



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medalum@vanderbilt.edu
www.mc.vanderbilt.edu/medschool/alumni

Vanderbilt Medical Alumni Reunion 2008

Planning for Reunion 2008 is well under way for Oct. 23-25. Starting on Thursday, Oct. 23, events include a golf outing at the Legends Golf Club and a welcome reception at the Country Music Hall of Fame; on Friday, Oct. 24, the Quinq Society Luncheon and our All-Alumni Grand Evening Dinner; and on Saturday, Oct. 25, the Vanderbilt vs. Duke Homecoming football game and our celebration year class parties round out the weekend. All alumni are invited to participate in Reunion 2008, but special anniversary class alumni are especially encouraged to attend. Please see page 58 and visit www.mc.vanderbilt.edu/medschool/alumni to stay posted on Reunion 2008 news.

Vanderbilt Medical Alumni-Student Network Program

In a co-sponsored initiative, VMAA and Vanderbilt medical students have created a new program called the Vanderbilt Medical Alumni-Student Network (VMA-SN). Unlike our VMAA mentoring program, which matches a medical alumnus/alumna with a graduate moving to a new residency position, the VMA-SN offers an opportunity to interact with all VUSM students participating in the VMS Careers in Medicine Elective. This program requires only a willingness to respond via e-mail to student inquiries regarding your medical specialty or fields of interest. If you would like to become a VMA-SN participant, or would like more information about this program, please visit: www.mc.vanderbilt.edu/medschool/portal/cim/alum_update.php.

Bio Career Center

The Vanderbilt Medical Alumni Association and the Biomedical Research Education and Training (BRET) Office of Career Development now offer free access to the Bio Career Center for all current graduate and medical students, residents, postdoctoral and clinical fellows and alumni. The service provides online career resources and job postings in biomedical fields. To register, visit the VMMA Web page at www.mc.vanderbilt.edu/medschool/alumni or visit the BioCareer.com page directly at www.vanderbiltbretcareerdevelopment.org. If you do not have a “vanderbilt.edu” or “alumni.vanderbilt.edu” address, you may still utilize this service after appropriate verification as a

Vanderbilt Medical alumnus/alumna. Click on the “Bio Career Center” link on the VMAA Web site for additional details.

VMAA Welcomes New Board Members

In June 2008, the VMMA Board elected the following medical alumni to serve as Regional Representatives for a four-year term: William Anderson M.D., (MD ‘69), Nashville, Tenn.; Clifton Cleveland M.D., (HS’ 64 FE ‘70), Chattanooga, Tenn.; K. Bruce Jones M.D., (MD ‘78), Jonesboro, Ark.; Susan Niermeyer, M.D., (MD ‘79), Denver, Colo.; Steven O’Sheal, M.D., (MD’81), Birmingham, Ala.; Chloe Rowe, M.D., (MD 03), New York, N.Y.; Thomas Nygaard, M.D., (MD ‘78), Lynchburg, Va.; Mitchell Steiner, M.D., (FE’93-’95, FA’93-’95), Memphis, Tenn.;

In addition, the Board welcomes the following board members, appointed or designated by virtue of office: Young Alumnus Representative Allan Moore, M.D., (MD ‘03), Philadelphia, Pa.; Graduate Student Representative Julie Field, Nashville, Tenn.; House staff Representative Christopher Kuzniewski, M.D., Nashville, Tenn.; and President, Class of 2009, Michael Young, Nashville, Tenn.

At Reunion, the VMAA Board will also welcome Dr. Wyatt Rousseau (MD ‘69, Dallas Tex.) as its incoming president, replacing our current outgoing VMAA president, Dr. Warren McPherson (HS’66, Murfreesboro, Tenn.). Dr. David Patterson (MD’85, Washington D.C.), newly elected president-elect, will assume his new VMAA Board role during the Reunion 2008 festivities.

Worthy of Note News

The VMAA always welcomes your new submissions for our alumni news section in Medicine Magazine. Please send your “worthy of note” news announcements and digital photographs to medalum@vanderbilt.edu; or fax to (615) 936-8475; or mail to VUMC, 21st Ave. South and Medical Center Drive, MCN D-8212, Nashville, TN 37232-2106.

Ann H. Price

KEY

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

* Indicates CRS member

30s

***Richard R. Crutcher, M.D.,** MD'37, HS'37-'40, HS'45-'46, reports he is still active at 95. His wife, Dot, turned 90 in April and is in good health. The couple has five children, nine grandchildren and eight great-grandchildren.

***Elbert S. C. Ford, M.D.,** MD'39, says his granddaughter, Molly Jane Ford, completed her A.R.N.P. training and practices in Washington state.

40s

Otis Gene Austin, M.D., MD'43, says his grandson, John, earned an MBA from Vanderbilt in 2005. His daughter, Fran, and her

husband, (John's parents) are both Vanderbilt grads as well.

***William R. DeLoache, M.D.,** MD'43, HS'44-'48, was recognized with the DeLoache Fellowship in Developmental/Behavioral Pediatrics at the Greenville Hospital System Children's Hospital. It has been endowed for a three-year term. He underwent heart valve replacement and repair at Vanderbilt, and reports much improved heart function.

Albert B. Finch, M.D., MD'46, HS'46-'47, of Odessa, Texas, is still practicing five days a week, in the same location where he began in 1957. He has three daughters, five grandchildren and four great-grandchildren. In his spare time, he has a motorcycle dealership and rides as often as he can, weather permitting.

James Richard Hamilton, M.D., MD'46, retired on Dec. 31, 2004, after spending his last six years of practice in Vanderbilt dermatology. He remains in good health. His wife, Ruth, died in March 2006.

William T. Price, M.D., MD'47, retired in September 2002 from his 50-year practice of neurological surgery.

***Sarah H. Sell, M.D.,** MD'48, HS'48-'50, was awarded an honorary degree by Vanderbilt in Pediatric Infectious Diseases on her 95th birthday. The event was attended by her son, Charles Gordon Sell and his family, as well as several nieces and nephews from Florida and Washington, D.C., and numerous friends. It was, she reports, "a happy and exciting day."

***Frederick W. Smith, M.D.,** MD'44, sends the sad news that his wife, Dorothy, died in January 2004.

David G. Stroup, M.D., MD'48, HS'48-'49, retired from 38 years of practice in Atlanta in May 1992, and moved to Brentwood, Tenn., in June 2007.

***Gilbert R. Sugarman, M.D.,** MD'49, reports that his wife, Doris, died in 2005. He has two grandchildren, Rebecca and Benjamin Hersh.

Thomas H. Williams Jr., M.D., MD'43, teaches Bible studies four times a week. He is blessed with a family that includes 15 great-grandchildren and grows larger each year.

Thomas B. Zerfoss Jr., M.D., MD'46, HS'46-'47, has retired from his medical practice in Grundy County, Tenn. To fill the void, he now spends two to three hours a day writing at his "office" - McDonalds. He hopes to attend his next class reunion.

50s

Alice H. Altstadt, M.D., MD'56, reports that her daughter, Robin, has received her DVM degree from Ross University School of Veterinary Medicine and is practicing in Laurel, Md. Robin is also showing her Morgan gelding in dressage and sidesaddle shows.

***Swan B. Burrus, M.D.,** MD'54, HS'54-'58, has two family members in the medical field. His son, Daniel Swan Burrus, M.D., practices orthopaedic surgery in Nashville, and grandson, Robert Barfield Smith graduated from LSU Medical School in May.

***Henry A. Callaway Jr., M.D.,** MD'54, HS'54-'55, reports that his son, G. Hadley Callaway, M.D., was inaugurated in October as president of the North Carolina Medical Society.

J. Edward Fisher, M.D., MD'53, of Atlanta, Ga., retired in March 2005. A son, Edward Jr., is a pharmacologist and son, David, is director of medical illustration at University of Alabama School of Medicine.

John H. Griscom, M.D., MD'54, HS'54-'56, FE'57-'59, HS'59-'60, is semi-retired and is busy doing medical consultations and hearings for Social Security Disability judges. His wife survived a major subarachnoid hemorrhage in 2002. They live in South Florida.

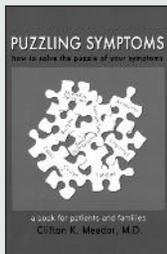
John B. Isom, M.D., MD'54, HS'54-'56, FE'59-'61, of Portland, Ore., retired in 1990.

Joseph E. Johnson III, M.D., MD'54, has been busy traveling and lecturing. He received the Centenary Medal from the Polish Society of Internal Medicine in Katowice, Poland, in September 2006. In November 2006, he lectured at the International Congress of Internal Medicine in Taipei, Taiwan. In November 2007, he was a guest lecturer at the West African College of Physicians in Ghana.

***Herman J. Kaplan, M.D.,** MD'54, HS'54-'57, is currently professor of Clinical Medicine at Vanderbilt.

Richard Lester, M.D., MD'53, HS'53-'54, of Huntsville, Ala., reports that his daughter, Patricia, is an assistant professor of Child Psychiatry at UCLA.

book focus



***Clifton K. Meador, M.D.,** MD'55, HS'59, FE'60, has written a new book, "Puzzling Symptoms: how to solve the puzzle of your symptoms." In the book, Meador reminds the reader how important the patients and their families are in guiding doctors to the correct diagnosis and treatment.

In his introduction, Meador talks about the old saying, "if you don't know what the patient has after you take the history, you probably will never know." But he offers another saying: "If you listen

to a patient long enough, the patient will tell you what the problem is."

One theme guides the book, Meador says, "there is not a demonstrable medical disease (diagnosis) behind every symptom, but there is a demonstrable cause for every symptom."

The book guides the reader through a process of discovery for the causes of symptoms. Early in the book, he discusses the diagnostic process and explains how the body works. He explains how it is possible for doctors to miss the cause of symptoms and clarifies some general principles for detecting the causes of symptoms. Meador is the author of a 2006 book, "Symptoms of Unknown Origin: A Medical Odyssey."

Rex McReynolds, M.D., MD'54, of San Antonio, Texas, retired from his solo pediatric practice in December 2005. He says that his four years at VUSM were among the most wonderful years of his life, allowing him to be a physician, a dream since his teenage years.

***Harry L. Page, M.D., MD'59,** HS'59-'63, reports that his son, Harry Lee Page III, married Ann Renner McNabb in October 2007. His family also welcomed a granddaughter, Mary Carter Page Fatzinger, in May 2007.

***Frank Riddick, M.D., MD'54,** was honored with the Lifetime Achievement Award during the Third Annual Spirit of Leadership Ceremony from Ochsner Health Systems. He is a Master of the American College of Physicians, was named CEO, Emeritus of Ochsner Clinic Foundation in 2001, and still provides part-time patient care. He received the American Medical Association's Distinguished Service Award in 2003 and was elected to membership in the Institute of Medicine and the National Academy of Sciences.

Marvin Schwartz, M.D., MD'55, is retired and living in Los Altos, Calif. He has four children, five grandchildren and a grand cat.

George E. Scott, M.D., MD'52, retired from his medical practice in 1992. He continues to play tennis five days a week, and enjoys fund-raising. He is a past chief of staff and member of the board of directors of the Santa Barbara (Calif.) Cottage Hospital. He serves on one of the physician committees overseeing the \$800 million complete rebuilding of the hospital.

***John Thomas (Tom) West, M.D., MD'51,** retired from practice in 1994, but still attends weekly tumor conferences at West Georgia Health Center. In family news, three great-granddaughters arrived this year. In June, he will sponsor two Jas Arnold



worthy of note

Never in his wildest dreams did Oscar Crofford, M.D., MD'55, HS'55-'56, '62, FA'65-'00, expect to be in the eye of a CF 4 tornado. But that's exactly where he and his wife, Jane, ended up as a tornado hit their farm in north Arkansas. The Croffords developed the Rocky Bayou Angus Farm and the Rocky Bayou Timber Farm in Melbourne, Ark., "the most beautiful place in North Arkansas," Crofford wrote. "Our lives were filled with happiness and feelings of accomplishment. For us the 'second time around,' was working," he said of farm life – his occupation after retiring from medicine at Vanderbilt in 1995.

The farm had been central to the life of Crofford's family, he says; in fact, he and Jane honeymooned there 51 years ago, and often vacationed there with their children.

But on Feb. 5, on an uncommonly warm day, their lives changed. He and Jane were watching the weather reports – a possible tornado had been sighted in Adkins, Ark., to their southwest, and was headed in their direction. The power went off, they heard the freight train sound, and the couple took shelter in a utility room underneath their stairs. The tornado hit about five seconds later. "We didn't have time to get frightened," he writes. When they emerged a few minutes later, their entire two-story home, guest house and garage were gone; their vehicles buried in rubble. Their six dogs were missing. They made it to a bunkhouse for the night, and at daybreak, the next morning, they realized they had lost everything but their lives. Nothing was undamaged. They lost three prize heifers, one dog, all buildings and vehicles, and 200 acres of mature timber. "Our friends and neighbors were wonderful. FEMA was worthless," he writes. "Our house was insured and State Farm paid off promptly."

Surviving the tornado was the easy part, he says. Deciding what to do after, more difficult. "I am 78. Jane is 74," he writes. But they decided to rebuild and start all over. Months later, he says he's still not sure they made the right decision.

We plan to "stay the course" as long as our good health continues," he writes. "Our new farm will certainly be different, but in its own way, it may be more beautiful than before. Life is still good."

To view Crofford's letter in its entirety, visit the alumni news section at

www.mc.vanderbilt.edu/vanderbiltmedicine/

Crofford's e-mail address is obcrofford@centurytel.net.

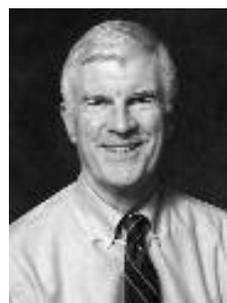
teams in the MS Scramble at the Hermitage Golf Course in Nashville.

60s

Ronald L. Alt, M.D., MD'68, of Stockton, Calif., retired in April 2005.

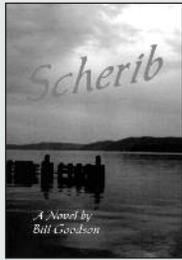
Frank D. Black, M.D., MD'67, semi-retired from emergency medicine in January, and is living in Indianapolis. He and his wife of 44 years, Lou Ann, have six grandchildren ranging from 2 to 17. He makes yearly mission trips to Africa and Honduras.

***William H. (Buck) Brewer, M.D., MD'68,** is semi retired, but still does sonography and body CT at Virginia Commonwealth University Medical Center/Medical College of Virginia Hospital. His



***Richard Johnston Jr., M.D., MD'61, HS'61,** was awarded the American Pediatric Society's highest honor – the 2008 John Howland Medal for lifetime contributions to child health and pediatrics. Among other accomplishments, Johnston led a coalition of pediatricians, obstetricians and clinical geneticists who succeeded in having folic acid added to fortified grain products in the United States. He currently teaches and works to support research at the University of Colorado at Denver, National Jewish Medical and Research Center and the Children's Hospital. He and his wife, Mary Anne, a Ph.D. medical educator, have two physician sons and their daughter is a child psychologist. Richard III is a 1989 graduate of VUSM. Johnston will receive Vanderbilt University School of Medicine's Distinguished Alumnus award in October.

book focus



Bill Goodson, M.D., MD'60, HS'60-'61, can add author to his list of accomplishments with the release of his second suspense novel and third book, "Scherib." The newest novel, a sequel to his first, "The Bossuet Conspiracy," is about the Catholic Church's problem with pedophilic priests, combined with domestic terrorism. The book is available on www.Amazon.com,

www.BarnesandNoble.com and www.xlibris.com/scherib.html, or you can visit Goodson's Web site at www.billgoodson.com for more information.

wife, Maxine, works part-time as a volunteer coordinator at VCUHS/MCVH. Daughters Amanda and Katie are married, and the Brewers have one grandson.

Robert M. Carey, M.D., MD'65, FE'70-'72, is David A. Harrison III Distinguished Professor of Medicine, Dean Emeritus and University Professor at the University of Virginia School of Medicine. He recently published a book, "Hormones and Hypertension." He will complete his term as chair of the Council Operations Committee of the American Heart Association and will become president of The

Endocrine Society in June. He and his wife, Theodora, moved last summer to their current home just west of Charlottesville. They have three children and five grandchildren.

Samuel H. Dillard Jr., M.D. MD'67, HS'67-'69, retired from Associated Pathologists in 2005. He was director of laboratory and chief of Pathology at Parkview Hospital-Centennial Medical Center in Nashville from 1974-2005 and is currently working as a consultant with the state of Tennessee. He and his wife of 45 years, Allison, have two daughters, a son and three grandchildren.



Stephen L. Hines, M.D., MD'77, HS'77-'80, won the 2008 Leadership Award from the American Medical Association Foundation. The award is for established physicians. He is medical director of the Golden Cross Academic Clinic, and on the faculty of the Internal Medicine Residency Program at Methodist Dallas Medical Center in Dallas.

***Arthur M. Freeman III, M.D., MD'67, left Louisiana State University School of Medicine in 2003 after 12 years as chair of Psychiatry and three years as dean. Following a stint as chair of Psychiatry at the University of Tennessee, he returned to his hometown of Birmingham where he is clinical professor of Psychiatry at the University of Alabama at Birmingham, and has a private practice. He is vice-chair of the financial oversight committee for the American Psychiatric Association and has recently been elected to the Board of Regents of the American College of Psychiatrists. Besides a knee replacement surgery in 2007, he continues to play golf and is doing well. His wife, Linda, has expanded her jewelry business, and they have three grandchildren – Stanley, Madeleine and Natalie. The girls were born only five days apart in 2007.**

Clifford L. Garrard Jr., M.D., MD'62, HS'63-66, reports that his son, Clifford Garrard III, M.D., MD'90, HS'90, practices general and vascular surgery in Nashville.

Daniel C. Geddie, M.D., MD'63, HS'67-'70, fully retired in December 2007.

***Murphy H. Green, M.D., MD'63, is medical director of the Cumberland Valley District Health Department serving five counties in Eastern Kentucky. Living in Bowling Green, Ky., Green has served as the aquatic chairman of the National Boy Scout Jamboree since 1993, and continues to play tennis – 3.5 United States Tennis Association doubles.**

***Robert B. Hale Jr., M.D., MD'63, HS'63-'65, of Huntsville, Ala., is retired from Pediatrics. Hale took his entire 31-member family – seven children, their spouses and 17 grandchildren – on a Christmas 2007 cruise. His grandson, Trey Del Greco, is a Vanderbilt University freshman on a golf scholarship.**

Hank Harrell Jr., M.D., MD'67, of Ocala, Fla., has retired from his 36-year practice of general internal medicine.

***Inpow D. Hong, M.D., MD'67, HS'71-'72, retired as captain in the U.S. Navy after 22 years of service. A daughter, Lisa, is married and has her Ph.D. from the University of Washington. A son, Robert, is working in Shanghai. Hong took a recent two-month trip exploring Israel and Eastern Europe.**

***David Rex Hunter, M.D., MD'68, retired in 2006 and is volunteering at the Siloam Family Health Center in Nashville. He lives in Goodlettsville, Tenn., next door to four of his grandchildren. The others live in St. Louis.**

***Verne C. Lanier Jr., M.D., MD'66, HS'66-'71, and his wife, Dean, have recently returned from a six-week mission trip to Cameroon, Africa, where Lanier served as an instructor and plastic surgeon at the Mbingo Medical Center serving the population of both natives and refugees from Kenya and the Congo. Dean taught English, first aid and basic hygiene.**

Henry R. Lesesne, M.D., MD'67, is semi-retired, but serves as the gastroenterology consultant for the North Carolina Prison System. Lesesne reports that his wife, Jean, still laughs at his jokes, and is a five-year survivor of a brain aneurysm. A son, Hal, and his family serve as missionaries in Mexico, and daughter, Marcy, has accumulated 6,500 hours of volunteer work at University of North Carolina hospitals.

Rebekah Naylor, M.D., MD'68, received the Distinguished Clinical Science Educator Award for 2006-2007 from the University of Texas Southwestern Medical Center in Dallas.

Robert Northcutt, M.D., MD'62, HS'66-'67, FE'67-'69, retired in October 2002. From February-

June 2003, he was the Honorary Professor of Medicine at the University of West Indies College of Medicine. More recently he has served as Medical Systems Consultant for the Barbados Diabetes Foundation. He and his wife, Diana Margaret, married in 2007.

***Soja Park-Bennett, M.D.,** MD'68, HS'68-'70, is working one day a week at Massachusetts General Hospital, and enjoys traveling. Both sons are on their own – Drake as a staff writer for the ideas section of the *Boston Globe* and Jason with a veterinary internship in Wildlife Safari Park in Winston, Ore.

J. Michael Reinhart, M.D., MD'67, HS'67-'68, of Santa Barbara, Calif., retired in November 2005.

Michael Brent Seagle, M.D., MD'67, HS'71-'72, is division chief of Plastic Surgery at the University of Florida College of Medicine in Gainesville.

***Herman D. Sorensen, M.D.,** MD'67, HS'67-'74, FE'74-'76, of Billings, Mont., retired from practice in July 2007.

Linton B. West Jr., M.D., MD'62, HS'62-'64, of Greenville, S.C., retired in July 2007 after 37 years of practicing urologic surgery. He has three children and two grandchildren.

70s

***Susan Andrews, M.D.,** MD'78, was featured in the "physician spotlight" page in a recent *Nashville Medical News*. The article talked about her use of the electronic medical record in her Murfreesboro practice.

***Frederic T. Billings III, M.D.,** MD'72, HS'72-'74, has practiced medical oncology and hematology for 30 years in Baton Rouge. His son, Josh, is married with two sons and living in New York, doing a fellowship in cardiac and critical care anesthesia at



***Brigadier Gen. Stephen L. Jones, M.D., MD'78, was honored in November at a Change of Command Ceremony. Jones is the commanding general of Pacific Regional Medical Command and Tripler Army Medical Center in Honolulu.**

Columbia. Daughter, Laura, lives in Nashville doing computer marketing. Her husband, **Garrett Key, M.D.,** MD'06, is a current psychiatry resident. Son, Kirk, is married and living in Atlanta working in commercial real estate.

***Thomas R. Fuller, M.D.,** MD'72, of Atlanta, has three sons with bachelor's degrees from Vanderbilt University and one son with a master's in engineering from Vanderbilt.

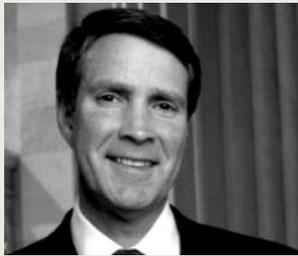
Russell Bruce Hubbard, M.D., MD'72, is rebuilding after his home burned down in October 2007. Hubbard reports nobody was harmed in the fire.

Jonathan S. Jacobs, D.M.D., M.D., MD'73, HS'75-'79, has completed seven years on the Surgical Executive Committee at the Sentara Leigh Hospital in Norfolk. He has also finished



Samuel J. Strada, Ph.D., Ph.D.'70, has been appointed dean of the University of South Alabama College of Medicine. He served as interim dean for the medical school prior to that. Strada joined USA in 1983 as professor and chair of pharmacology, and was named senior associate medical dean in 1994. During his tenure at USA, he has served as acting director of the graduate program in basic medical sciences, assistant dean for admissions, and was acting chair of psychiatry. In addition, he was instrumental in the creation of the Office of Technology Development, Office of Research Compliance and Assurance and the USA Technology and Research Park. He serves as president of the South Alabama Medical Science Foundation.

worthy of note



***William H. Frist, M.D., FA'86-'00, former U.S. Senate Majority Leader, teamed up with Uwe Reinhardt, a professor of economics and public affairs and specialist in health policy to teach a graduate course at Princeton. The course, "The Political Economy of Health Systems," was offered at the Woodrow Wilson School of Public and International Affairs. An article about the duo appeared in the Dec. 12, 2007, edition of Princeton Alumni Weekly.**

The article, "The Senator's Next Act," calls the two faculty an "odd couple," pointing out the gap in their worldviews – Reinhardt, the social democrat, and Frist, the self-declared Reagan Republican.

It's part of Frist's yearlong stint as a visiting professor; he's the Frederick H. Schultz Class of 1951 Visiting Professor of International Economic Policy. And it's not the first time the two have met, the article points out. Almost 35 years ago, as a student, Frist took Reinhardt's courses on microeconomics, accounting and corporate finance. Reinhardt said he was "tops" in every one of the classes.

In other news, Frist will receive the second annual Charles E. Horton Humanitarian Award for Global Health from the Physicians for Peace at the organization's Celebrating the Nations Gala in October.

retired from her position with the school district; Son, Read, graduated from the University of California at San Francisco and is a second-year resident at UCSF; Daughter, Rebecca, is a first-year resident at Cedars-Sinai; Son Cason is at UT Southwestern, where he helped establish the Monday Clinic, a student-run medical operation that provides free medical care to uninsured patients in North Dallas; and daughter, Susanna, is now in a master in teaching program.

Gary Penner, M.D., MD'72, has two sons who have graduated from VUSM in the past decade – **Erik Penner, M.D., MD'99,** and **Dave, Penner M.D., MD'06.**



***W. Bedford Waters, M.D., MD'74, professor of Urology and Urologic Oncology in the Department of Surgery at the University of Tennessee Graduate School of Medicine, has been named president of the American Board of Urology. Since 2003, Waters has served as a trustee of ABU, representing the American College of Surgeons. He joined the UT faculty in 2001. In addition, Waters serves as a regional director for the Vanderbilt Medical Alumni Association.**

three years of chairing the Ethics Committee for the American Society of Plastic Surgery and continues as president and medical director of his plastic surgery group. He has three children, one of whom is in the six-year integrated program in Plastic Surgery at New York University, and three grandchildren.

Kelly McKee, M.D., HS'76-'78, FE'78-'81, has been named executive director of Operations for Quintiles Transnational Corporation's Public Health and Government Services unit. Prior to this position, McKee served as senior director, Medical and Scientific Services (Infectious Diseases) for Quintiles where he was responsible for providing medical support to investigative sites. Previously, he served as Senior Director for Clinical Research for DynPort Vaccine Company where he directed clinical trials.

John (Rush) Pierce Jr., M.D., HS'77-'81, was tapped to serve as the Interim Regional Dean for the School of Medicine at Amarillo, and after holding that position for 15 months has returned to patient care and teaching. He still spends a third of his time doing public health. He also reports some family news: His wife, Diane, has

***William M. Petrie, M.D., MD'72,** is Medical Director of HCA Parthenon Pavilion in Nashville and is on the board of directors of Psychiatric Solutions. He has an eight-year-old daughter, Halle.

Rev. Elizabeth Powell, M.D., MD'76, HS'76-'79, is the new vicar at St. Augustine of Canterbury Episcopal Church in Navarre, Fla. She and her husband, the Rev. David Powell, live in Fort Walton Beach. She began her theological studies in 2002 after a career in pediatrics and received her Master of Divinity degree in 2005. She continues to participate in medical missions to Central America.

Ervin M. Thompson, M.D., MD'72, left his position as medical director of the Behavioral Health Center at Carolinas Medical Center in November 2006 after 15 years. In December 2006 he opened an outpatient practice of psychiatry in Hilton Head, S.C. He and his wife have two children, and a new home. A leg injury ended his tennis career, and he has now taken up golf.

***Ralph E. Wesley, M.D., MD'72, HS'72-'73,** was given the Orkan Stasior Leadership Award by the American Society of Ophthalmic Plastic and Reconstructive



Alix Ashare, M.D., MD'99, and her husband, **James Carroll, M.D.,** had their first child, **Ryan Jamison,** in October 2007. They are currently living in Iowa City where she is an assistant professor in the Division of Pulmonary, Critical Care and Occupational Medicine at the University of Iowa.

Surgery. He is founding director of the Ophthalmic Plastic and Reconstructive Surgery and clinical professor of Ophthalmology at Vanderbilt. He and his wife, Julia, have four children – John, Tim, Thomas and Susan.

80s

Theodore P. Chambers, M.D., MD'87, of Fairfax, Va., is still practicing medicine. He and his wife have a son, Theo, 10, and a daughter, Gabriela, 7.

Michael Peter Diamond, M.D., MD'81, HS'81-'85, has joined the Capital Investment Group (CIG) Medical Advisory Board. The board is made up of physicians from across the world. Diamond is associate chairman of the Department of Obstetrics and Gynecology at the Wayne State University School of Medicine in Detroit.

N. Lindsay Harris, M.D., MD'88, is Sports Medicine Fellowship Director at the Aspen Foundation for Sports Medicine. Previously, he was director of Sports Medicine at the University of Colorado Health Sciences Center.

***Sally H. Houston, M.D.,** MD'87, was named chief of staff at Tampa General Hospital in October 2006. She is also senior vice president /chief medical officer. She and her husband, Jamie, celebrated their 20th wedding anniversary in May 2007.

Russell Howerton, M.D., MD'83, HS'83-'84, is associate professor of Surgery at Wake Forest University School of Medicine and associate chief medical officer at North Carolina Baptist Hospital. He and his wife, Pamela, have four daughters – Jennifer, Amanda, Zoe and Gwyneth.

Stuart Gold, M.D., MD'81, has been named chief of pediatric hematology and oncology at the University of North Carolina at Chapel Hill School of Medicine, where he has been on faculty

since 1989. As division chief he is responsible for developing the division's clinical care programs, translational research, and training of residents and fellows. He will continue running a monthly outreach clinic at New Hanover Regional Medical Center in Wilmington, N.C.

Capt. Thomas Moore, M.D., MD'88, remains on active duty in the U.S. Navy and expects to stay until retirement in 2009. He has been deployed once to Iraq. He is the head of the Family Medicine Department and a faculty member in the Family Medicine Training Program at Naval Hospital in Jacksonville, Fla. where he and his partner, Steve Gillick, reside. Moore has two sons – Jonathan and Daniel.

Lisa Nilles, M.D., MD'87, completed a Master of Theology degree after 11 years of general pediatric practice and now works as a chaplain in health care settings. She has also become an advocate for single-payer universal health care and works for this at both the state and national levels.

Eric Senn, M.D., MD'88, lives in Myrtle Beach, S.C., and was named chief of staff at the Grand Strand Regional Medical Center this year. He serves as secretary of the board of directors at Carolinas Center for Medical Excellence (the Medicare PRO for North and South Carolina, and is also secretary of the board of directors for Carolina Health Specialists, the largest private multi-specialty group in South Carolina. He and his wife, Angelika, have a 3-year-old son, Aleks.

***Mace Rothenberg, M.D.,** HS'82-'85, received the Lane Adams Quality of Life Award from the American Cancer Society. The award recognizes individuals who have made a difference through innovation, leadership, and consistent excellence in providing compassionate, skilled care, and counsel to persons living with cancer and their families. He is



Christopher Hudson, M.D., MD'98, and his wife, Christiana, welcomed a son, **August William Hudson, in Boston, in January. August joins older brother, George Brooks. Upon completion of his Master's in Master of Public Health degree at Harvard in June, he and his family will be moving to San Antonio, Texas, where he will begin a two-year residency in aerospace medicine.**

professor of Medicine at VUMC and Ingram Professor of Cancer Research at the Vanderbilt-Ingram Cancer Center. He and his wife, Joyce, have a daughter, Stephanie, 18, and son, Bryce, 14.

Julie Fanburg-Smith, M.D., MD'88, has been a member of the International Skeletal Society since 1990. She is internationally recognized in bone and soft tissue pathology. A son, Jacob, was born in 2001.

Ken Stein, M.D., MD'88, practices emergency medicine and critical care medicine in suburban St.

Louis. He has traveled to 70 countries and now shares his love of traveling and gymnastics with his wife, Thalia, and a son and daughter.

Stephen M. Strakowski, M.D., MD'88, was recently named chair of Psychiatry at the University of Cincinnati College of Medicine after serving as interim chair for 18 months.

Terri Vrtiska, M.D., MD'87, won the 2006 Carmen Award from the Mayo Clinic's Department of Radiology –for Excellence in Clinical Radiology. One award is

worthy of note

John H. Johnson, M.D., MD'87, is chairman of the Department of Anesthesiology at Tyrone Hospital in Tyrone, Pa., and chairman of the Department of Pain Management at Tyrone Hospital, the VA Hospital in Altoona, Pa., and Nason Hospital in Roaring Springs, Pa. He is a partner with Blair County Anesthesia, Altoona Hospital in Altoona, Pa., and chairman/CEO of Central Anesthesia and Lighthouse Medical. Johnson's interests aren't just health-related. He serves as chairman/CEO of Michael Wesetly Clothing, Johnny On the Spot, Ltd., Johnny Foods, Inc., Central Foods, LLC, and Curry Auto Group. He and his wife, Paula, have two sons – John, 12, and Brian, 4.



***Robert W. Steele, M.D., MD'93, and his wife, Renee', welcomed twin boys, Christopher and Austin, last year. Steele remains in general pediatrics at St. John's Children's Hospital in Springfield, Mo.**



Lt. Col. Terri L. Riutcel, M.D., MD'95, is an active duty Air Force psychiatrist and medical acupuncturist currently deployed to Sather Air Force Base in Baghdad, Iraq, where she is Chief of Mental Health Services at the 447th Air Expeditionary Group, which provides care to deployed U.S. military personnel. She works with a group of medical personnel activated from Air National Guard units across the United States.

given per year by peer selection. Vrtiska married Bernie Swenson in April 2005.

90s

Charles Cobb, M.D., MD'92, is working hard in Jacksonville, Fla., and reports he has still not won the lottery.

Frank Anthony Cornella, M.D., MD'92, HS'92-'96, has married Gayle S. Cornella.

Joel Corvera, M.D., MD'98, will be finishing his cardiothoracic surgical residency at Emory University in June. In July, he will start a one-year "super" fellowship in thoracic aortic surgery at the University of Florida in Gainesville. He married Mary Lester, M.D., in September 2007.

Angie Wilson Curry, M.D., MD'93, is a member of a large obstetrics and gynecology practice in Jonesboro, Ark. She and her husband, Steve, have been married for 15 years and have two sons – Ben and Josh, 7 and 10.

Sara K. Dann, M.D., MD'92, is in private practice in child, adolescent and adult psychiatry in Coral Gables, Fla. She has three children – Alexandra, 13, Tucker, 10, and Isabella, 9.

Keri DeSoto, M.D., MD'97, is in private practice in internal medicine in Prescott, Ariz. She and her husband, Michael, have two children – Sophia and Helena.

Cynthia Downard, M.D., MD'97, has finished training and is a pediatric surgeon at Kosair Children's Hospital in Louisville, Ky.

Scott R. Gibbs, M.D., MD'92, was appointed to the Bronchoesophagology/Laryngology Committee of the American Academy of Otolaryngology – Head and Neck Surgery in October 2007. He also serves on the Board of Directors of the West Virginia Academy of Otolaryngology – Head and Neck Surgery.

Christopher Michael Hunt, M.D., MD'93, is founder and medical director of Home Physicians Medical Group, Inc., a physician house call service that serves San Diego County. He and his wife, Maggie, have three children – Jordan, 9, James, 3, and Charles, 10 months.

Elizabeth Jackson Luce, M.D., MD'93, of Grand Rapids, Mich., reports that her private practice has merged with two other practices. She and her husband, Paul, celebrated their 15th anniversary in May. They have two children, Jackson, 10, and Clara, 8, and a pet hedgehog.

Vicente Mejia, M.D., HS'03-'04, has joined University Surgical Associates in Fort Oglethorpe, Ga. Mejia joined the group in 2005 and is a board-certified general surgeon with added board certification in trauma and surgical critical care. He also serves as an assistant professor of Surgery at the University of Tennessee College of Medicine. He completed a trauma and surgical critical care fellowship in 2005 at Vanderbilt.

Margaret Metts, M.D., MD'97, is president of Wilson Radiation Oncology Associates and recently welcomed her fourth child, Mattie.

Alexander Minella, M.D., MD'98, moved in fall 2007 to Northwestern University Medical School in Chicago to start a lab in the hematology/oncology division.

Wynne Morrison, M.D., MD'93, is fellowship director in Pediatric Critical Care at the Children's Hospital of Philadelphia. She has two children – Ellie, 5, and Anna, 4.

Steven R. Norris, M.D., MD'93, served two tours as an orthopaedic surgeon in the U.S. Army during Operation Enduring Freedom in Afghanistan from 2001-2002, and is currently a partner with Greensboro Orthopaedics in Greensboro, N.C. He and his wife, Jane, recently celebrated their 11th wedding anniversary. He enjoys coaching Little League baseball for his three sons – John, William and Daniel.

Daniel R. Penn, M.D., MD'98, was recently appointed chief of Radiology at Kaiser Hospital in Santa Rosa, Calif.

Laura Peterson, M.D., MD'93, became a stay-at-home mom after the birth of her seventh child. Her husband, Bob, is an equity partner at Kirkland and Ellis in Los Angeles.

V. Seenu Reddy, M.D., HS'95-'02, has been selected as one of the *San Antonio Business Journal's* "Top 40 Under 40" and was featured on the NBC-affiliate in San Antonio regarding endovascular surgical repair for thoracic aortic aneurysms. He has also been selected to serve on the Board of Directors of San Antonio's affiliate of the American Heart Association. His wife, Meera, has been named director for legal services for Bexar County's Family Justice Center.

Steven M. Rowe, M.D., MD'98, welcomed daughter, Elizabeth, on Dec. 21, 2007. She joins big brother, Andrew.

Jonathan C. Smith, M.D., MD'98, and his wife, Kathryn, welcomed a daughter, Rebecca, on March 10. She weighed 6 pounds, 6 ounces.

Jeremy Spector, M.D., MD'98, completed a GI fellowship at Duke University and is now clinical assistant professor at Brown University and director of Endoscopy at Memorial Hospital of Rhode Island. He has two children – Sam, 3, and Sadie, 9 months.

Christopher Stanley, M.D., HS'90'94, is living in Daytona Beach with his wife and three children, and reports he will have both a high school freshman and a first-grader next year. He is director of Florida's only American Association of Gynecologic Laparoscopists-sanctioned gynecology endoscopy fellowship and has started a robotic surgery program with another VUSM alum, **Kelly Molpus, M.D.**, HS'89-'93.

Stephen F. Stanziale, M.D., MD'97, is in private practice at Anne Arundel Medical Center in Annapolis, Md. He has two sons – Lucca, 2 ½, and Max, 6 months.

Katherine Rebecca Steward, M.D., MD'98, HS'98-'00, welcomed a second child, her first daughter, Diana Violet, on May 9, 2007.

Greg Stewart, M.D., MD'98, and his wife, Amber, have become foster parents to three young children – Glenn, 10, Denver, 8, and Emily, 8. The couple also has two daughters – Mary Keaton, 9, and Annie, 8.

Kristen Albright Terrill, M.D., MD'98, HS'98-'01, is a part-time pediatrician and a full-time mom to children Jackson, 5, Cooper, 3, and a baby girl expected in May.

Richard Todd, M.D., MD'98, has begun a primary care practice, after being an internal medicine hospitalist for the past four years. He reports that his wife, Chandler Todd, M.D., continues to teach on the pediatric faculty at the University of New Mexico. They have two children – Geneva, 6, and Caleb, 2.

Thomas Hien D. Tran, M.D., MD'97, is an attending in radiology at the AtlantiCare Regional Medical Center. He and his wife, Hope, live in Egg Harbor Township, N.J., and have a daughter, Tiffany, and a son, Thomas Stephen.

Jasminka Vukanovic-Criley, M.D., HS'95-'98, was inducted to the fellowship program of the American College of Physicians.

2000-

Lynn Bunch, M.D., MD'02, completed a fellowship in geriatrics and palliative medicine at Mount Sinai School of Medicine in June 2007. She is assistant professor in the Department of Geriatrics at Mount Sinai.

Danielle Dion, M.D., MD'03, HS'03-'07, and her husband, Sam, have returned to the Pacific Northwest. She has joined a multispecialty obstetrics and gynecology group in Portland, Ore.



Kristin N. White, M.D., MD'03, and her husband, **Andrew White, M.D.**, MD'04, welcomed a daughter, **Matilda Nyweide**, in November 2007. She completed a residency at the University of Washington, where she served as chief resident, and is working as a pediatrician with Virginia Mason Sand Point Pediatrics in Seattle.

VMAA events



Michael Kallen, right, a first-year VUSM student, visits with his White Coat sponsor ***James D. Snell Jr., M.D.**, MD'58, HS'58, FE'60, at the White Coat Sponsor reception in March. The event was hosted by the Vanderbilt Medical Alumni Association.



The Vanderbilt Medical Alumni Association hosted a dinner at the Ritz Carlton in Dallas in February. Among those attending were ***Jack Martin, M.D.**, MD'53, and his wife, **Ann**, front, and ***Wyatt Rousseau, M.D.**, MD'69, and his wife, **Carolyn**, back.



Eric Shinohara, M.D., MD'03, HS'03-'05, is a radiation oncologist at the Hospital of the University of Pennsylvania. He and his wife, Laura, were married in September 2007 in Hawaii. Jacob Richardson, M.D., MD'03, served as a groomsman.

Christine Dove, M.D., MD'02, HS'03-'07, is doing her fellowship training in Women's Imaging at Vanderbilt through July. She will join the faculty as an assistant professor of Radiology in July.

Laura K. Green, M.D., MD'02, joined the Krieger Eye Institute at Sinai Hospital of Baltimore in August 2007 where she is teach-

ing residents and doing cataract, cornea and refractive surgery. She and her husband, Basil, have a daughter, Anna Virginia, 2 1/2, and were expecting a baby boy in April.

Rajnish Gupta, M.D., MD'02, and Sonal Gupta, M.D., MD'02, have joined the faculty at Vanderbilt after residencies at the University of Michigan, Ann Arbor – Rajnish

in anesthesiology and Sonal in internal medicine. They have two daughters, Kiran, 3, and Jaya, 5 months.

Brian R. Lindman, M.D., MD'03, celebrated the birth of his second daughter, Eden Jane, in October 2007.

Morgan McDonald, M.D., MD'03, was appointed associate profes-

sor of Internal Medicine and Pediatrics at the University of North Carolina and is currently serving as associate program director of the Med-Peds Residency Program. A son, Thomas Whitaker (Whit), was born in February 2007.

Karen Meredith, M.D., MD'02, HS'02-'06, and her husband, Todd, welcomed their second child, Claire, in October 2007. She joins big sister Ava, 3.

Morgan Parker, M.D., MD'02, is practicing comprehensive ophthalmology in Nashville with Guardian Eye Associates.

Michael D. Scott, M.D., MD'02, finished his residency in 2005. He is a partner with the Blue Ridge Emergency Physicians at Oconee Memorial Hospital in Seneca, S.C.

Todd Wine, M.D., MD'03, will finish a residency in otolaryngology in June, and will be moving to Denver, Colo., to practice general otolaryngology. He married **Maggie Chan, M.D., MD'04,** in October 2005. She will begin a fellowship in pediatric endocrinology in Denver in July.

Frank Zhan, M.D., MD'02, HS'02-'03, will finish a dermatology residency at Vanderbilt in June and will be doing a Mohs fellowship at Roswell Park Cancer Institute in Buffalo, N.Y.

VANDERBILT MEDICAL ALUMNI REUNION 2008	Special Anniversary Class Years		Class Social Chairs
	Quing +	1957 and earlier	Dr. George Holcomb ('46)
50th	1958/1959	Dr. Paul Barnett & Dr. Burton Silbert ('58)/Dr. Harry Page ('59)	
45th	1962/1963	Dr. Harold Moses ('62)/Dr. David Thombs & Dr. H. Newton Lovvorn ('63)	
40th	1967/1968	Dr. William Ralph ('67)/Dr. Robert Dunkerley & Dr. James Price ('68)	
35th	1972/1973	Dr. William Petrie ('72)/Dr. David Robertson ('73)	
30th	1977/1978	Dr. Ben Byrd ('77)/Dr. Ann Price & Dr. Jeff Carter ('78)	
25th	1982/1983	Dr. Alice Hinton ('82)/Dr. Michael Callaway ('83)	
20th	1987/1988	Dr. Erich Groos & Dr. William Burnette ('87)/Dr. Chris Hill ('88)	
15th	1992/1993	Dr. Chace Carpenter ('92)/Dr. James Johnson ('93)	
10th	1997/1998	Dr. Daniel Viner ('97)/Dr. Laura Lawson ('98)	
5th	2002/2003	Drs. Lindsay & Thomas Rauth ('02)/Dr. Kristin Ehts ('03)	

***Joey Barnett, Ph.D.**, vice chair and director of graduate studies in Pharmacology at VUMC, received the 2008 Faculty Teaching Award from the pharmacology graduate students for his excellence in teaching, mentoring and scientific leadership during the Joel G. Hardman Student-Invited Pharmacology Forum in April.

Jeffrey Bishop, M.D., has his sights set on improving the quality of ethics consultation and education at VUMC. Since coming on board last summer as director of the Clinical Ethics Education and Consultation Service, part of Vanderbilt's Center for Biomedical Ethics and Society, Bishop has begun undertaking a needs assessment for ethics consultation and is working with residency and clerkship program directors to enhance education opportunities for medical residents and other graduate students.

Randy Blakely, Ph.D., the Allan D. Bass Professor of Pharmacology and director of Vanderbilt's Center for Molecular Neuroscience, received two major awards this year from the American Society for Pharmacology and Experimental Therapeutics (ASPET), one of the oldest and most prestigious science organizations. The 2008 ASPET Julius Axelrod Award, which recognizes outstanding scientific contributions in research and mentoring, and an ASPET-Astellas Award in Translational Pharmacology were presented to Blakely on April 5 during the Experimental Biology Meeting in San Diego. Blakely is renowned for his research on neurotransmitter transporters.

Donald Brady, M.D., MD '90, HS '90-'92, is the School of Medicine's new associate dean of Graduate Medical Education (GME). Brady, who was president of his medical school class, has been associate professor of Medicine, associate vice chair for Education, and co-director of Internal Medicine residency at Emory. He replaces ***Fred Kirchner Jr., M.D.**, VUSM's longtime director of resident education.

Jeffrey Conn, Ph.D., has been named the first Lee E. Limbird Professor of Pharmacology at VUMC. The chair was established recently to honor ***Lee Limbird, Ph.D.**, former chair of Pharmacology and former associate vice chancellor for Research at Vanderbilt.

***Colleen Conway-Welch, Ph.D.**, dean of the Vanderbilt University School of Nursing, was recently selected to join the Advisory Committee to the Director (ACD) of the National Institutes of Health. Conway-Welch is one of five new members of the 15-member group that advises the NIH director on

policy and planning issues important to the agency's mission of conducting and supporting biomedical and behavioral research, research training and translation of research results for the public.

Dana Crawford, Ph.D., assistant professor of Molecular Physiology & Biophysics, was selected as one of "Tomorrow's PIs" by the magazine *Genome Technology*. In a special issue, the magazine profiled 31 young scientists it deemed to be up-and-coming principal investigators (PIs). Crawford, an investigator in the Center for Human Genetics Research (CHGR), was nominated for the distinction by ***Jonathan Haines, Ph.D.**, the center's director. Her group focuses on understanding how genetic variation impacts common, complex human characteristics, in particular susceptibility to disease.

Terence Dermody, M.D., has been named to direct Vanderbilt's Division of Pediatric Infectious Diseases. He succeeds **Peter Wright, M.D.**, who retired as division director last July to split his teaching and research time between Vanderbilt and Dartmouth. Dermody joined the Department of Pediatrics in 1990. He is also professor of Microbiology and Immunology at Vanderbilt and adjunct professor of Biomedical Sciences at Meharry Medical College. Dermody directs the Elizabeth B. Lamb Center for Pediatric Research and the Vanderbilt Medical Scientist Training Program. His teaching efforts have been recognized by several awards, including a Vanderbilt University Chair of Teaching Excellence.

Fred DeWeese, has retired as vice president for Facilities Planning and Development at VUMC. At Vanderbilt since March 1999, he has managed \$85 million to \$100 million a year on major construction projects. In the past nine years, VUMC has gone from nearly 5 million square feet of space to more than 9 million square feet. In December, he was featured as one of "Twenty who are making a difference," in *Healthcare Design* magazine.

S.K. Dey, Ph.D., director of the Division of Reproductive and Developmental Biology at VUMC, has won a major international award for his creative and significant contributions to the field of reproductive biology. Dey received the 2008 Carl G. Hartman Award from the Society for the Study of Reproduction during the society's annual meeting in Hawaii in May. The award is the highest honor bestowed by the society. Dey's group was the first to show that the embryo and uterus communicate with each other for optimal attachment throughout implantation

and early pregnancy. Dey will move to Cincinnati Children's Hospital Research Foundation to inaugurate a new Division of Reproductive Sciences this summer.

Kathryn Edwards, M.D., was named to the Sarah H. Sell chair in Pediatrics during a celebration honoring the 95th birthday of ***Sarah Sell, M.D.**, on March 20. Sell, whose many accomplishments include finding a vaccine for Haemophilus influenza type-b, trained Edwards, who is now a renowned vaccine researcher.

***Gerald Fenichel, M.D.**, is being honored by a newly endowed chair in the Department of Neurology – the Gerald M. Fenichel Chair in Neurology. His contributions to VUMC and pediatric neurology span three deans, four vice-chancellors for Health Affairs and nearly four decades. Fenichel, a professor of Neurology and Pediatrics, founded the Department of Neurology and served as chair from 1969-2001. He was director of Pediatric Neurology and neurologist-in-chief at the Monroe Carell Jr. Children's Hospital at Vanderbilt until January of this year. A gift from Fenichel supported creation of the chair, which also received contributions from friends and former residents. Neurology chair ***Robert Macdonald, M.D., Ph.D.**, is actively recruiting a pediatric neurologist/physician/scientist to hold the chair.

Esther Eisenberg, M.D., M.P.H., director of the Division of Reproductive Endocrinology at VUMC, has been named Medical Officer and Project Scientist for the Reproductive Medicine Network of the National Institute of Child Health and Human Development (NICHD), a division of the National Institutes of Health. For the next two years, she will split her time between the NICHD in Washington, D.C., and VUMC, where she will continue her clinical infertility and reproductive endocrinology practice and teaching medical students and residents.

Todd Giorgio, Ph.D., has been named chair of the Department of Biomedical Engineering at Vanderbilt. He succeeds **Thomas Harris, Ph.D.**, who is retiring in May. He is a researcher at the Vanderbilt-Ingram Cancer Center, where he has contributed new ideas to the treatment of cancer through his work on the disease at the cellular and molecular levels.

F. Peter (Fred) Guengerich, Ph.D., professor of Biochemistry and director of the Center in Molecular Toxicology, has been named the first holder of the Harry P. Broquist Chair in Biochemistry. Guengerich chose to name the new chair in honor of his graduate school

mentor, **Harry Broquist, Ph.D.**, professor emeritus of Biochemistry, who served on the Vanderbilt faculty from 1969 to 1988.

Veronica Gunn, M.D., M.P.H., MD'97, has been named chief medical officer for the Tennessee Department of Health. In her new role, Gunn, assistant professor of Pediatrics, will work to establish statewide health objectives, develop public health programs and maintain the state's public health infrastructure. Although she will take a leave of absence from Vanderbilt, she will continue to collaborate with her former colleagues. Beginning in 2005, Gunn served as medical director for the Tennessee Governor's Office of Children's Care Coordination while she continued on staff at the Monroe Carell Jr. Children's Hospital at Vanderbilt.

***Gerald Hickson, M.D.**, associate dean for Clinical Affairs, director of the Center for Patient and Professional Advocacy, and director of Clinical Risk and Loss Prevention, has been named to the Joseph C. Ross Chair in Medical Education and Administration. The newly endowed chair will support Hickson's research on understanding why families file suit, why certain physicians attract malpractice claims and how to develop strategies for intervening when physicians experience high

malpractice claims. The endowed chair is named for ***Joseph C. Ross, M.D.**, professor of Medicine, Emeritus, and associate vice chancellor for Health Affairs, Emeritus. Ross is a 1954 graduate of Vanderbilt University School of Medicine and served as associate vice chancellor from 1980 to 1998. He played a key role in establishing Vanderbilt's Emergency Medicine department and LifeFlight.

Scott Hiebert, Ph.D., has been named associate director for Basic Science Programs at Vanderbilt-Ingram Cancer Center. Hiebert, professor of Biochemistry and Leader of the Signal Transduction and Cellular Proliferation Program, succeeds ***Jennifer Pietenpol, Ph.D.**, now director of the Cancer Center. Hiebert will help oversee the Cancer Center's research program, which includes more than 300 faculty members and more than \$140 million in research funding from public and private sources.

***Mike Higgins, M.D., M.P.H.**, professor and chair of Anesthesiology, has been installed as president-elect of the 710-member Tennessee Society of Anesthesiologists. His one-year term as president starts in February 2009. The society works to promote patient safety and standards of anesthesiology care,

as well as providing general advocacy for anesthesiologists and their patients.

***Howard Jones III, M.D.**, professor of Obstetrics and Gynecology and director of Gynecologic Oncology for the past 27 years, will serve as interim chair of the Department of Obstetrics and Gynecology, replacing ***Nancy Chescheir, M.D.**, who left in April.

Björn Knollmann, M.D., Ph.D., associate professor of Medicine and Pharmacology, received a National Established Investigator Award from the American Heart Association (AHA). The five-year award will enable him to advance his research exploring basic mechanisms of cardiac arrhythmias and new therapies.

Julie Koh, Ph.D., has a new position – director of Development for Biomedical Research, helping scientists find non-federal funding for their research. Koh was most recently a postdoctoral fellow in the Vanderbilt Eye Institute. Her office is currently building a Web-based resource for faculty members to find foundation grant initiatives that match their research areas.

Kimberly Lomis, M.D., assistant professor of Surgery, received the 2008 Outstanding Teacher Award from the Association of Surgical Education (ASE). The award is given annually to up to four individuals who are involved in surgical education and who are considered by their chairs, peers and students to be exceptional teachers. Lomis is a founding member of the Vanderbilt School of Medicine Academy for Teaching Excellence and is a VUSM Master Clinical Teacher. She and three other surgical professors across the country were selected for the award by a national committee of educators.

Michael Laposata, M.D., Ph.D., has joined VUMC as executive vice chair and director of the Division of Laboratory Medicine for the Department of Pathology. He will also serve as medical director of Clinical Laboratories and chief of Pathology Services at Vanderbilt University Hospital. Laposata previously served as professor of Pathology at Harvard Medical School and is credited with establishing the Division of Laboratory Medicine at Massachusetts General Hospital, a program that rose to national prominence under his leadership. *Boston Magazine* included him in its annual list of Best Doctors for his clinical expertise with coagulation disorders. His research focuses on understanding the basis of fatty acid alterations in cystic fibrosis with the ultimate goal of identifying fatty acid replacement therapies.



NEIL BRAKE

Jonathan Gitlin, M.D., of Washington University, is the new chair of the Department of Pediatrics at the Monroe Carell Jr. Children's Hospital at Vanderbilt. Prior to joining Vanderbilt, he was the Helene B. Roberson Professor of Pediatrics and professor of Genetics at Washington University School of Medicine and scientific director of the Children's Discovery Institute. He also taught and cared for patients at St. Louis Children's Hospital, where he is chief of the Division of Genetics & Genomic Medicine. The extensive national search was led by ***Eric Neilson, M.D.**, chair

of the Department of Medicine. Gitlin replaces **Arnold Strauss, M.D.**, who departed last spring to serve as chair of the Department of Pediatrics at the University of Cincinnati College of Medicine, chief medical officer of Cincinnati Children's and director of the Cincinnati Children's Research Foundation. Gitlin is an expert in human genetic disease and his research focuses on the inorganic chemistry of living organisms, using zebrafish as an experimental system to explore the role of genetics and nutrition in early human development. He is the recipient of numerous awards, including the E. Mead Johnson Award for Excellence in Research from the Society for Pediatric Research, the Samuel Rosenthal Foundation Award for Excellence in Academic Pediatrics, the Chancellor's Hartwell Prize for Innovative Research from Washington University and a MERIT Award for research from the National Institutes of Health. Gitlin has authored or co-authored more than 120 peer-reviewed publications and serves on several councils and committees, including roles at the National Institutes of Health's National Institute of Child Health and Human Development and the March of Dimes, among others.

Nancy Lorenzi, Ph.D., assistant vice chancellor for Health Affairs and professor of Biomedical Informatics, has been appointed to the Board of Scientific Counselors, National Center for Public Health Informatics of the Centers for Disease Control and Prevention. The board advises the secretary of the U.S. Department of Health and Human Services and the director of the CDC concerning programs and research strategies and goals, including second-level peer review of contract proposals and applications for research grants. Her term continues through August 2010.

Robert Macdonald, M.D., Ph.D., Vanderbilt's chair of Neurology has been awarded the highest honor given by the American Academy of Neurology. He presented the 2008 Robert Wartenberg Lecture for outstanding clinical research at the upcoming AAN conference and was also presented with the 1996 Cotzias Award and Lecture by the Academy, and is believed to be the first person honored with both lectures.

***Jonathan Nesbitt, M.D.**, an experienced Nashville cardiothoracic surgeon, has joined the Vanderbilt faculty as associate professor of Thoracic Surgery. Nesbitt comes to Vanderbilt from Saint Thomas Hospital, where he led its Division of Cardiothoracic Surgery.

Juliann Paolicchi, M.D., has been named the director of Child Neurology, director of Pediatric Epilepsy and EEG and associate professor of Neurology and Pediatrics at the Monroe Carell Jr. Children's Hospital at Vanderbilt. Prior to joining Vanderbilt, Paolicchi was the director of Pediatric Epilepsy Research and of the Comprehensive Epilepsy Center at Nationwide Children's Hospital in Columbus, Ohio. She also served as director of the Clinical Neurophysiology Fellowship at Ohio State University.

James Patton, Ph.D., professor of Radiology and Radiological Sciences, was given the Marshall Brucer Award by the Southeastern Chapter of the Society of Nuclear Medicine (SNM) at its annual meeting in Atlanta. The annual award, established in 1991, recognizes outstanding service to the chapter and contributions to the field of nuclear medicine.

***Dan Roden, M.D.**, has received the 2008 Rawls-Palmer Progress in Medicine Award from the American Society for Clinical Pharmacology and Therapeutics. Roden was honored for his pioneering work on the genetic basis for variability among individuals in their responses to various drugs.



Center, and Lynn Matrisian, Ph.D., chair of the Department of Cancer Biology (shown here left to right) were selected for the honor.

"The women in the Class of '08 are intensely passionate about their respective fields," said Cindy Sanders, editor of *Nashville Medical News*. "Whether it's stopping cancer in its tracks, giving a child the chance to thrive, reaching out to the underserved, providing solace and support to the worried families of patients, striving for parity among mental and physical health options, or training young physicians, these health care leaders turn barriers to care into the stepping stones of innovation."

Those selected were nominated by someone in the health care community.

Each year *Nashville Medical News*, a local health care publication, honors 10 health care professionals as "Women to Watch" in the medical field.

For the first time, Vanderbilt Medical Center women captured three of the coveted spots. Meg Rush, M.D., chief of staff for the Monroe Carell Jr. Children's Hospital at Vanderbilt, Jennifer Pietenpol, Ph.D., director of the Vanderbilt-Ingram Cancer

***Mace Rothenberg, M.D.**, of the Vanderbilt-Ingram Cancer Center, has been named one of the nation's top cancer caregivers by the American Cancer Society. He is one of eight care providers from a variety of backgrounds and regions chosen to receive the 2008 American Cancer Society Lane W. Adams Quality of Life Award, a national prize for cancer care. The award recognizes individuals who have made a difference through innovation, leadership and consistent excellence in providing compassionate, skilled care and counsel to persons living with cancer and their families.

Donna Seger, M.D., executive director of the Tennessee Poison Center at Vanderbilt, delivered the Louis Roche Lecture at the 28th international congress of the European Association of Poison Centers and Clinical Toxicologists May 7 in Seville, Spain. The lectureship recognizes individuals who have made significant contributions to the field of clinical toxicology.

***John Sergent, M.D.**, professor of Medicine and vice chair for Education in the Department of Medicine at VUMC, has been elected a Master of the American College of Rheumatology. Recognition as a Master of the ACR is one of the highest honors the College bestows. The designation is conferred on ACR members, age 65 or older, who have made outstanding contributions to the field of rheumatology through scholarly achievement and/or service to their patients, students and profession. This honor is usually

bestowed upon no more than 15 members per year.

Sergent has been a member of the ACR for 35 years. He also served as president from 1992-1993, and was elected a Master of the American College of Physicians last year

***Doug Vaughan, M.D.**, chief of the Division of Cardiovascular Medicine since 1999, will leave Vanderbilt in June to accept a position as chair of the Department of Medicine at Northwestern University Feinberg School of Medicine and Northwestern Memorial Hospital. The Department of Medicine at the Feinberg School of Medicine is the largest department in the medical center with 225 full-time faculty based primarily on the downtown Chicago campus and more than 40 full-time faculty at Evanston Northwestern Healthcare (ENH). He joined the Vanderbilt faculty in 1993.

Ashok Bajaj, M.D., HS'82-'85, FE'86-'89, and his wife, Trish, were killed in February when their twin-engine plane crashed shortly after taking off near Wichita, Kan. He was 49. A cardiologist, he specialized in the heart's electrical system. He is survived by two sons – Brian, 22, and Kevin, 19.

John A. Barrow III, M.D., MD'59, HS'59, HS'62-'66, died March 7. He was 74. An orthopaedic surgeon, he practiced from 1969-1995 in Nashville, Henderson, Ky., and several other cities. He is survived by six daughters – Jan, Julie, Rita, Mary Jane, Leigh and Emily; five sons – John, Lee, Tom, Sam and Jeremiah; 17 grandchildren and four great-grandchildren.

Jack Batson Sr., M.D., MD'58, HS'60, died in February. He was 74. He maintained a private practice in Nashville from 1965 until his retirement in 1994, specializing in internal medicine, gastroenterology, and geriatrics. He received the American Medical Association's Award for Advanced Achievement in Internal Medicine in 1987. He is survived by his wife, Barbara, children – **Miller Batson, M.D.**, MD'82, Brian, Alan, Drew, William and Susan – and six grandchildren.

John P. Bell, M.D., MD'40, died March 2. He was 91. For 35 years, beginning in 1949, he maintained a private practice in psychiatry. During and after his private practice he taught in the University of Louisville's Department of Psychiatry. He is survived by his wife, Nancy; daughter, Jane; sons, Walter, David and Victor; nine grandchildren and one great-grandchild.

***Henry Clay Blount Jr., M.D.**, MD'46, died March 19. He practiced radiology in Marion, Ohio, Des Moines, Iowa, and Chattanooga, Tenn. He and his wife, Berniece, published the definitive book "French Cameo Glass," for which Henry wrote the text and took the photographs. He was also an avid collector of

agates and shells. He is survived by a son, Henry III, daughter, Amy, a grandson and two great-grandsons.

Herbert R. Brettell, M.D., HS'50-'51, died Dec. 5, 2007 in Denver. He was 86. During World War II, he was one of the American liberators of the Buchenwald Concentration Camp. After his residency at Vanderbilt, he was appointed to the internal medicine faculty at the University of Colorado Medical School, where he served until his retirement. He was the founding chairman of the Department of Family Practice at the Medical School and also served as the official physician to the Colorado State Hospitals, as the director of the Medical School's Rural Preceptorships in Colorado, and as co-founder of the Retired Faculty Association. He is survived by his wife of 61 years, Ellen, four children, seven grandchildren and two great-grandchildren.

Robert L. Chalfant, M.D., HS'48-'53, died April 20. He was 87. He practiced obstetrics and gynecology first at the Burch Clinic in Nashville, then went into private practice and retired in 1992. He was an assistant clinical professor at Vanderbilt, and served both as president and chairman of the Tennessee Medical Association during his years of practice. He is survived by his wife, Elizabeth, and son, Robert Jr., M.D.

Lawrence Samuel Cohen, M.D., MD'60, died Feb. 15. He was 72. He had a private orthopaedics practice for 33 years in Tampa, Fla., and for six years at the James Haley VA Hospital. He is survived by his wife, Betty, and children – Lawrence Jr., Nancy, Alice and Jeffrey.

Ronald R. DiNella, M.D., MD'60, HS'60, died March 30. He was 80. He practiced general surgery privately in the Muscle Shoals area from 1974 until his retirement in 1993. He is survived by his wife of 54 years, Gerry, sons – Ron, Ken, Tom and Glenn – daughter, Ellen, and 10 grandchildren.

James William Dobbs, Ph.D., Ph.D.'71, died Feb. 4 at his home in Pine Bluff, Ark. A pharmacist for many years, he is survived by a son, David, and three grandchildren.

Luke L. Ellenburg Sr., M.D., MD'41, HS'41, '49, died Jan 28. He was 93. He was the first pediatrician in Greeneville, Tenn. Survivors include a son, **Luke Ellenburg Jr., M.D.**, MD'75, daughter, Mary Anne, seven grandchildren and three great-grandchildren.

Tom N. Evans, M.D., MD'45, died in February. He was 87. During his medical career he was professor and chair of obstetrics and gynecology at Wayne State University and also dean of the School of Medicine from 1970-1972. He was founder and director of the C. S. Mott Center for Human Growth and Development in the Detroit Medical Center from 1974-1983, and served as an examiner for the American Board of Obstetrics and Gynecology for 17 years. In 1974, the March of Dimes identified him as the Humanitarian of the Year. He is survived by his wife, Jo, and daughter, Laura.

Julius Goodman, M.D., HS'61-'62, died in January. He was 72. Goodman was co-founder of the Indianapolis Neurosurgical Group and a national leader in neurosurgical education. The Carmel, Ind., resident was instrumental in the 1970 creation of his neurosurgical private practice, which grew to be the largest such group in the country.

***Thomas R. Harwood, M.D.**, MD'53, HS'53-'55, died Jan. 14. He retired as associate professor emeritus from Northwestern Medical School in Chicago, and he also received the Borden Award for Undergraduate Research in 1953. Survivors include his wife, Phyllis, three children – Joseph, Thomas and Shannon – and two granddaughters.

Charles Kennedy Holland Jr., M.D., MD'45, died Jan. 26 at his

home in Indianola, Miss. He practiced internal medicine at the McAlester Clinic in McAlester, Okla. He and his wife returned to their home in Mississippi after retirement. He is survived by his wife, Betty; a daughter, Betsy; three sons – Charles II, Leigh and Bob – and 17 grandchildren.

Minter Morgan Jackson, M.D., HS'51-'54, died Nov. 25, 2007, in Louisville, Ky. He was 92. Jack, as he was known to family and friends, practiced medicine in Florence, Ala., from 1955-1989. He is survived by sons, Louis and James, a daughter, Abby, and three grandchildren.

Howard C. Johnson Sr., M.D., MD'43, HS'44-'48, died Dec. 8, 2007. He was 90. He was the first chief of staff of what later became Humana Hospital in downtown Sheffield, Ala. In 1948 he joined Colbert County Hospital, now Helen Keller Hospital, and served an internal medicine practice until the end of 1986. He is survived by his daughter, Grace, sons, Howard III and Gilbert, and a granddaughter.

Edward E. Kimbrough III, M.D., MD'53, died Jan. 24. He was 78. He joined the Moore Orthopaedic Clinic in 1963, and became a pioneer in the field helping to perform some of the first total hip replacements. He served as a physician for the USC athletics teams for more than 15 years and became a lifelong Gamecock fan. He also taught students and trained residents at the University of South Carolina School of Medicine. He served as chair of the Department of Orthopaedics and retired from practice in 1995. He is survived by his wife of 53 years, Jeanette, four children – Catherine, Nancy, Carolyn and Edward IV – and 10 grandchildren.

John "JW" Laing, M.D., MD'63, HS'63-'65, died Jan. 16, 2006. He was 68. He was a retired neurosurgeon, having practiced at Chambersburg and Waynesboro Hospitals, the U.S. Naval Hospital in Long Beach, Calif., the U.S.

Naval Hospital in Naples, Italy, the U.S. Naval Hospital in San Diego, Calif., and Al Hada Hospital in Taif, Saudi Arabia. After retiring from the Chambersburg Hospital in 1997, he had a heart transplant in January 2000. He is survived by his wife, Patricia; four sons – Daniel, Matthew, Mark and John – and a granddaughter.

***Gerald P. Martin, M.D.,** MD'66, died Feb. 22 after a battle with cancer. Martin practiced with Roseville (Calif.) Radiology for 33 years, and was president of the Placer/Nevada County Medical Society for several years. He is survived by his wife, Suella; children – Elizabeth, Gregory and Katherine – and six grandchildren.

Karin A. L. McCloskey, M.D., MD'83, died in November 2007. She was 48. A specialist in emergency medicine, she wrote a textbook on the transport of sick children, "Pediatric Transport Medicine," and was on leave of absence from Strong Memorial Hospital in Rochester, N.Y. She was an international lecturer and consultant who spearheaded pediatric care programs in South Africa and Australia. Survivors include her 8-year-old son, William.

***Mary L. McIlhany, M.D.,** MD'50, HS'50-'51, died Feb. 23, 2007. She specialized in internal medicine and pulmonary disease, and also served as a consultant to the central office of the Social Security Administration. Upon her retirement, she established a research fellowship in Neurology at Johns Hopkins and a lectureship in Pulmonary Physiology at Vanderbilt.

***Elise Moss Neeld, M.D.,** MD'68, died Dec. 5, 2007. She practiced diagnostic radiology in St. Louis, Benton, Ill, Grand Forks, N.D., and Park Rapids, Minn. She had been retired since 1994. She is survived by a son, David, and a grandson.

Lamb Bolton Myhr, M.D., MD'41, HS'45-'48, died April 16. He was

90. He entered practice in Jackson, Tenn., joining The Jackson Clinic in 1949, and retiring in 1994. He is survived by his wife, Betty, three sons – L.B., David and Stephen – and a granddaughter.

Robert Marshall Pitts, M.D., MD'52, HS'52-'55, died in May 2007. He was a pediatric surgeon at Children's Hospital of Alabama from 1960 to 1995. When he retired, it was estimated that he had performed more than 21,000 major operations on preemies, babies, children and teenagers, and more than 100,000 minor operations. He is survived by his wife, the Rev. Carolyn Spradley Pitts; their four children – Sister Mary Dominic, Robert Jr., Peter and Cathryn – and two granddaughters.

G. Thomas Proctor, M.D., HS'50-'53, died Feb. 25. He was 84. He served as a medical missionary in the Holy Land and Kenya and was an ordained Bible Presbyterian minister. He is survived by his wife, Kathryn; two sons, Dan and Phillip; three daughters – Susan, Eva and Betty – and 12 grandchildren.

Gene Thomas Qualls, M.D., MD'52, HS'52-'55, died March 9. He was 83. He practiced pediatrics in Marion, Ohio, and later in Sheffield, Ala, for 20 years. Retiring from medicine, he began a second career as a Jungian analyst after studying at the C.G. Jung Institute in Zurich, Switzerland. He and his wife returned to the U.S. in 1981, settling in Birmingham, Ala., to practice psychology. He is survived by his wife, Nancy, and several children and grandchildren.

David B. Ross, M.D., MD'80, HS'80-'84, died Dec. 27, 2007. An orthopaedic surgeon, who specialized in joint replacements, he is survived by his wife, Stephanie, and children, William and Kathryn.

Samuel Benton Rutledge, M.D., HS'66-'69, died March 26. He was a radiologist for 31 years with Radiology Associates in Nashville and was very active at showing Appaloosa Horses on the state

and national level. He is survived by his wife of 49 years, Billie, daughters, Benicia and Beth, and a granddaughter.

Robert Neil Sadler, M.D., MD'47, HS'47-'48, '53-'56, died Dec. 8, 2007. He practiced surgery for 52 years, and was chief of surgery at Park View and West Side Hospitals in Nashville. He is survived by his wife, Ellen; a son, Robert Jr.; daughters, Sue and Jane; stepsons, Sam, Russell and Jim; and 10 grandchildren.

***Madison Houston Sarratt, M.D.,** MD'47, HS'47-'55, FA'63-'98, died Nov. 22, 2007. He was 83. He was former chief of surgery at Parkview Hospital, now Centennial Hospital, in Nashville, and was clinical professor at Vanderbilt, in private practice until 1998. In June 1998 he was presented the Second Annual Distinguished Alumnus Award of the Lonnie S. Burnett Ob-Gyn Society. He is survived by his wife, Dorothy, children, Marianne, Madison Jr., Marday, and Robert, and eight grandchildren.

James Gordon Seyfried, M.D., MD'48, HS'48-'49, died April 11. He was 84. He was an orthopaedic surgeon with the Gould Medical Group in Modesto, Calif., from 1957-1990, was one of the first 20 members of the Gould Medical Group, and one of the first three orthopaedic surgeons to practice in Modesto. He also served as president of the Memorial Staff at Memorial Medical Center. He is survived by his sons, Mark, Doug, Don and Scott, stepdaughters, Cindy and Chris, and eight grandchildren.

Harold Dixon Stalvey, M.D., MD'47, HS'47-'48, died Dec. 28, 2007. He was 86. During his career, he worked at Massachusetts General Hospital, Harvard Medical School, University of South Carolina Medical School and Educational Advantage. He is survived by his wife, Elizabeth; sons, John and Larry; daughter, Renee; and three grandsons.

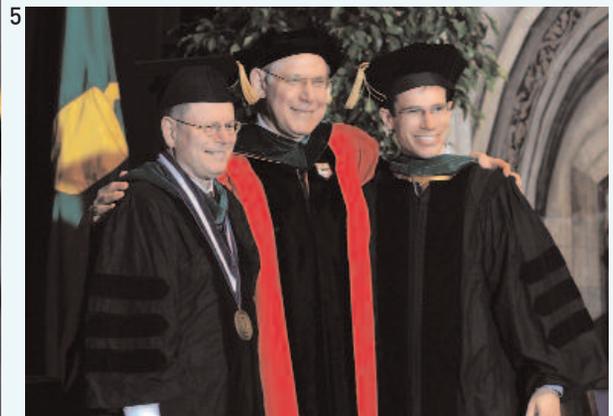
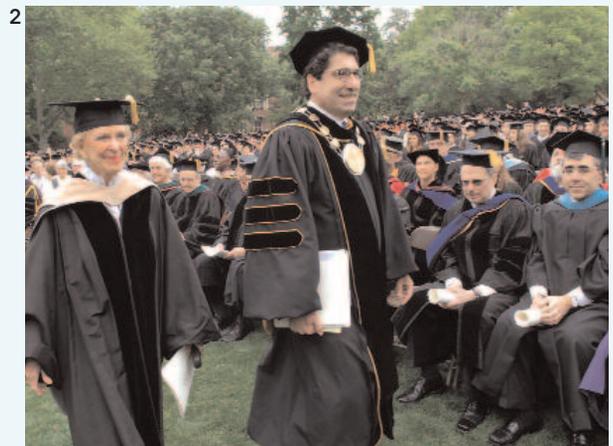
***James Phillip Wilson, M.D.,** HS'66-'69, FE'69-'70, died Nov. 27, 2007. He was 67. He practiced internal medicine at Saint Thomas Hospital and founded The Wilson Medical Group at VUMC. During his medical practice he was associate professor of Medicine at VUMC, assistant to the director of the Vanderbilt Subacute Care Unit, director of the Vanderbilt Adult Primary Care Center, and director of the Wilson Medical Group. He is survived by his wife of 43 years, Pat; daughter, Loretta; and son, James.

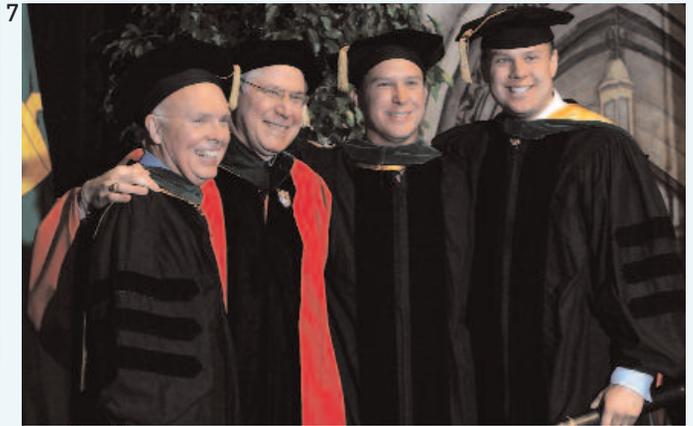
Graduation 2008 Photo Gallery

PHOTOS BY NEIL BRAKE

Pictured here:

1. This year's emeritus faculty members include, from left, Anderson Spickard Jr., M.D., Frederick Kirchner, M.D., and Gerald Gotterer, M.D., Ph.D.
2. Chancellor Nick Zeppos and Board of Trust chairman Martha Ingram make their way to the stage on Alumni Lawn.
3. Sonjay Patel, left, greets Milton Ochieng as they line up for the University Commencement procession.
4. Aline Bernard celebrates with her father, Vanderbilt faculty member Gordon Bernard, M.D., who presented her with her medical degree.
5. Kevin Elias, right, poses with his father, Sherman Elias, M.D., left, and Dean Steven Gabbe, M.D.
6. Vanderbilt medical students stand and cheer as their degrees are conferred on Alumni Lawn during the Commencement ceremony.
7. Dean Gabbe poses with Vanderbilt faculty member Allen Kaiser, M.D., MD'67, HS'71, FE'72-'73, and graduating sons (left to right) Dan and Clay.
8. Dean Gabbe with Founder's Medal recipient India Fox Landrigan.





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