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A new
direction
in medical
education



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Music meets medicine

New physicians, left to right, Adam Pitts, Brandon Ritz, Judson Williams, Chris Anderson and Colin Crosby pose for a celebratory photo after receiving their Doctor of Medicine degrees at Nashville's historic Ryman Auditorium. See more graduation photos on page 60.

:: on the cover

The longtime practice of cramming students' brains with basic science, then throwing them into patient care, is changing.



TOO MUCH INFORMATION **12**



MAGNOLIA CURTAIN **32**



PRACTICE MAKES PERFECT **36**

:: departments

- Making the Rounds **2**
- Around the Medical Center **3**
- Healthtalk **7**
- Alumni Profile **8**
- Canby Robinson Society **43**
- Alumni Journal **47**
- Alumni/Faculty News **48**

:: features

Too much information **12**

Is it time for a change in medical education?

A fresh palette **20**

Crafting a new curriculum

Medicine Plus **26**

Dual-degree, research programs let students blend passions

Stepping outside the magnolia curtain **32**

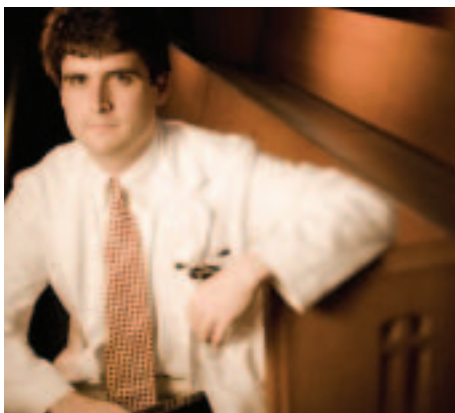
...and into the community

Practice makes perfect **36**

VUSM's simulation and standardized patient programs

Education that keeps going and going **40**

Learning, the lifelong way



MEDICINE PLUS **26**

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

At Vanderbilt, we make doctors.



DEAN DIXON

There are a great many other things we do, but none may be more important than the work we do to produce exceptional physicians. I hope you can forgive the awkward and perhaps simplistic analogy that in this training role we appear much like a manufacturer, and our product is a remarkably capable, pattern-discerning, communication system armed with the tools necessary to deliver advice and a deliverable called health.

Like any manufacturer, we constantly seek to improve our “manufacturing” process. Surprisingly, for an industry so steeped in innovation, the “factory floor” of American medical education has changed remarkably little since 1925 when Abraham Flexner led a revolution in our industry. It is time – some would argue well past time – for us to re-conceptualize how we train and produce the next generation of physicians and physician leaders.

This issue of *Vanderbilt Medicine* examines the influences shaping our understanding of the educational process; it surveys some of the best thinkers in medical education and describes the thoughtful re-engineering of our own factory floor at Vanderbilt.

My friend and colleague, Dr. Bill Stead, the guru of our informatics-rich environment at Vanderbilt, loves to describe the problem this way: A diligent

physician reads two journal articles each evening. By the end of that first year of such a deliberate effort the physician will merely be three years behind in his reading. That is how rapid the pace of innovation. We simply cannot cram in all that data and information – not in four years... not in a lifetime.

In the “The Singularity is Near: When Humans Transcend Biology,” a book I quote quite often, Ray Kurzweil makes the case that we have moved to a new form of evolution. Instead of evolving biologically, we are evolving technologically. Our brains, as remarkable as they are, remain hamstrung by their size and by the paltry pace of their neurochemical storage and retrieval machinery. Kurzweil sees evolution by peripheral. We will add accuracy, speed and capacity to our brains by using computers as effectively. Facts, once the *sine qua non* of a fine medical education, become the grist of silicon-based, not hydro-carbon-based, memory.

The real skills of medicine – how to find and evaluate facts, not memorize them – will emerge. Just-in-time, not just-in-case, learning will characterize the modern clinician. Individual brainpower will increasingly be seen to be of less importance than the collective brainpower of collected brains. Doctoring is a team sport and will become even more so. The solo practitioner evolves as a team member. And our educational process needs to teach team building, communication and networked intelligence.

I know many of you are proud of the medical training you received here at Vanderbilt. Changing even one jot or tittle in the curriculum that helped make you into a Vanderbilt doctor should be done with great care. I encourage you to be thoughtfully critical of the changes we propose. In this respect, we hope to bring your collective experience to the table and use your valuable insights to design for the future. **vm**

Investigators track ACL surgery's impact on arthritis

Caused by the breakdown and loss of cartilage in the joints, degenerative arthritis, or osteoarthritis, afflicts an estimated 20 million people in the United States.

Vanderbilt University Medical Center, along with six other academic institutions across the country, is investigating the long-term effects of anterior cruciate ligament (ACL) reconstruction surgery on the development of degenerative arthritis. The study is being funded by a four-year, \$1.2 million grant from the National Institutes of Health.

Vanderbilt is the coordinating site for the multi-center cohort study, entitled "Prognosis and Predictors of ACL Reconstruction: a Multicenter Cohort Study." Enrollment is expected to reach 3,000.

Patients who undergo ACL reconstructive surgery can have several outcomes — return to active status, re-injury or the development of post-surgical arthritis.

"We are hoping to determine the most important predictors that lead to future arthritis in the knees of ACL reconstructive patients," said Kurt Spindler, M.D., director of the Division of Sports Medicine and head physician for Vanderbilt Athletics.

"What stops young people or athletes from playing sports is the development of arthritis in their knees. We can fix ligament instabilities and remove loose bodies in the knee, but when they wear away the articular surface, which leads to the development of arthritis, we have no cure for that.

"Our ultimate goal is to develop an equation to determine at the time of surgery what a person's risk profile is to developing arthritis," Spindler said. **VM**

—JESSICA PASLEY

News and happenings at Vanderbilt Medical Center

VUMC debuts novel stem cell heart therapy

Vanderbilt University Medical Center is one of three medical centers in the country performing a novel therapy that uses bone marrow stem cells to stimulate regeneration of the heart muscle after a heart attack.

Vanderbilt is the first in the state to provide this new treatment modality as part of a multi-center, randomized study funded by Amorcyte, a privately funded cell-therapy company studying stem cells for the treatment of cardiovascular disease.

Physicians are excited about the prospects of this therapy because of the enormous potential to "transform the way we treat people with cardiac disease," said Douglas Vaughan, M.D., chief of the Division of Cardiovascular Medicine. John Plummer, 63, underwent the stem cell regeneration therapy on March 11, about one week after experiencing a heart attack.

"This is the first patient of many who we will enroll in our randomized-controlled trials to study the effects of cell therapy in treating cardiac disease.

"It is truly gratifying that we have reached this point. There are no guarantees," said Plummer. "It was the prospect of improvement — any improvement — that made it worth it. There are certain risks, but the prospect of the study proving to be valuable to others as well, all of those considerations made it seem like something I ought to do."

Plummer, an English professor for 36 years at Vanderbilt University, was not the first patient tested for eligibility into the trial. More than 100 patients were screened, but did not meet the criteria for study participation — impaired heart function after an acute heart attack.

"If we treat a patient rapidly, some may not have any damage at all," said David Zhao, M.D., director of the Cardiac Cath Lab. "But for those who, despite all efforts, suffer damage to the heart muscle, we are studying the effects of this treatment in repairing the heart muscle.

"We are hoping that this is just the beginning of the journey and eventually we will be able to provide this unique therapy as part of our treatment protocol to patients with a damaged heart," he said.

"This is truly a historical event," said Scott Phillips, M.D., a cardiology fellow. "If this therapy works, it has the potential to affect millions of people." **VM**

—JESSICA PASLEY



John Plummer, Vanderbilt
University English Professor

Vanderbilt-Ingram to expand clinic space

When the dust settles on a new renovation project involving Vanderbilt-Ingram's Henry-Joyce Cancer Clinic, waiting room space and exam rooms will nearly double to help meet the needs of an ever-increasing number of cancer patients in Middle Tennessee and beyond.

With approximately 52,000 outpatient visits in the last fiscal year, adding more space to handle the influx was inevitable.

"The numbers have skyrocketed by about 60 percent since 2002," said David Johnson, M.D., deputy director of Vanderbilt-Ingram. "They have leveled off a bit, but only because there is a limit to what we can physically do. We can't fit in any more people."

The estimated \$15 million renovation plan is set to begin in early summer and take about 18 months. The current space of 58,000 square feet will double to 116,000 square feet once the work is done. The changes will take place in several stages, so the business of seeing and treating patients can continue through the renovation process.

The cancer clinic (where patients see their oncologists) will be temporarily re-located to the second floor of The Vanderbilt Clinic. The clinic's current space on the first floor will be completely gutted and redesigned. By the end of 2007, the clinic will move back downstairs to its newly expanded space, and renovation will begin on the second floor for a new Chemotherapy Infusion Center. When that work is complete and the Infusion Center moves to its new home from the first floor, construction will begin on a new waiting room, reception/check-in area and resource center off the Preston Building Lobby.

The current plans are just the first step in a substantial commitment to expanding the Cancer Center to meet a growing demand for its services. Outpatient visits are up 35 percent since 2002, more than 90 percent of the care delivered at Vanderbilt-Ingram is on an outpatient basis, and up to half of all cancer patients here come from more than 100 miles away, Johnson said.

Growth in the clinic involves many factors, including the growth of the aging population, but it's also because there are more cancer survivors. In 2006, numbers swelled to more than 10 million living cancer survivors in the United States.

Officials at Vanderbilt-Ingram estimate the price tag on the entire upgrade at about \$15 million, with \$10 million of that money coming from planned philanthropic efforts. **VM**

—HEATHER NEWMAN



ANNE RAYNER

The Vanderbilt-Ingram Cancer Center is embarking on an ambitious plan to renovate and expand its clinic space.

DANA JOHNSON



Medical student Albert Attia, right, celebrates with his father, Neguib, at Match Day.

DANA JOHNSON



Brooke Thompson, right, gets a hug from classmate Kristina Collins.

It's a match

Vanderbilt University School of Medicine students were rewarded in March with offers from the country's top medical centers during this year's Match Day celebration.

Match Day is the culmination of a yearlong process during which students are matched through the National Residency Match Program (NRMP) with medical centers and hospitals across the country.

Of the 114 graduating students, the most diverse class in VUSM history, 28 matched at Vanderbilt.

Highlights included three students matching to Massachusetts General Hospital, three to Brigham & Women's Hospital, five to Beth Israel Deaconess Medical Center in Boston and five to the University of Washington.

"We know how great these students are and it is clear that the best hospitals around the country know how great they are as well," said School of Medicine Dean Steven Gabbe, M.D. "It was an amazing match. Coast to coast, these are the best programs in the country."

Gabbe kicked off the Match Day celebration by making a \$100 contribution to the fishbowl that's traditionally given to the last student to receive an envelope.

Scott Rodgers, M.D., assistant dean for Medical Students, led students through the event by drawing names at random, with each student leaving a dollar in the fishbowl and then reading his or her match, until only one name was left.

Jessica Sparks, the last person to match, said it was well worth the wait to learn she had matched for Pediatrics at Children's Hospital in Philadelphia. In addition to the good news, she received the fishbowl containing \$214.

Early match was available for students going into Ophthalmology, Neurosurgery and Urology. Match Day was Webcast live, allowing family and friends to watch the event from their home computers. **VM**

—CRAIG BOERNER

Nasal flu spray found to help the very young

A new study co-authored by Vanderbilt's Kathryn Edwards, M.D., suggests that the nasal spray flu vaccine is twice as effective as the flu shot in children ages 6 months to 5 years.

The nasal spray flu vaccine, licensed for children over 5 years of age as Flumist, has been available for some time, but not for children under 5 or in anyone with a history of asthma-like symptoms, which disappointed some parents of younger children who had been awaiting an option to the injection form of the flu shot.

"We suspected the live, weakened virus might offer younger children more protection and this study shows that it does," said Edwards, professor of Pediatrics. "It works better in children because they have not been infected with the influenza vaccine many times before and they have not received vaccine many times, so the live vaccine virus has a better 'take,' or works better."

Another compelling reason to expand the recommended age for use of the live vaccine is the possibility it may help to offset flu vaccine shortages that have happened almost annually for the last five years.

This study took place at 249 sites in 16 countries, involving 7,852 children who completed the trial. It directly compared the inactivated flu shot with the live attenuated nasal spray.

While 55 percent fewer children got the flu when taking the nasal spray, there were more side effects like wheezing (3.8 percent versus 2.1 percent), and hospitalizations were more frequent among the 6- to 11-month-old infants who received the nasal flu vaccine.

"The increase in wheezing in children less than 1 year of age who received their first dose of the live vaccine is of concern," Edwards said. "For that reason the vaccine will not be licensed for children less than 1 year of age or for use in children with underlying asthma." **VM**

—CAROLE BARTOO

Jacobson outlines bold vision for VUMC

Building on the success of a 10-year strategic plan set for Vanderbilt University Medical Center in 1998, vice chancellor for Health Affairs Harry Jacobson, M.D., formalized a new vision for the medical campus and its employees in March during his annual State of the Medical Center address.

In the decade since Jacobson assumed the Medical Center's helm, several goals have now been met — in many cases, well ahead of schedule.

"If you look at 1998, our Medical Center budget was \$811 million," Jacobson said. "We said by 2008 we would reach \$1.4 billion and a lot of people thought that would not be possible. And our budget for [2007] is now about \$2 billion.

"In 1998 we were sitting at about 2.5 million square feet of space in the Medical Center, and in 2008 we are sitting at about 4.5 million square feet."

Jacobson outlined 'Vision 2020,' which will expand the academic medicine mission of "Research, Training, Patient Care" to a flywheel model.

Areas identified as a top priority for Vision 2020 are chronic disease and end-of-life care, both of which represent a large — and growing — cost to society.

From a finance perspective, VUMC has immediate goals to increase net revenue at hospitals and clinics by 5.9 percent or more and by 6.1 percent or more for the Vanderbilt Medical Group. Uncompensated care increased by 23 percent in fiscal year 2007 — from \$97.4 million to \$119.9 million.

Jacobson said the nation's health care system is "inefficient," at times unsafe, mediocre, and slow to adopt new science or respond to challenges and threats.

There are tough medical education challenges ahead, Jacobson said, as the demand for doctors exceeds the supply pipeline and the ratio of future earnings to cost of education declines. **VM**

—CRAIG BOERNER



David Bichell, M.D., examines patient Haydan Paris during a follow-up appointment.

Designer scars

In what's become a growing trend in pediatric surgery — selecting a child's scar for future cosmetic reasons — surgeons at the Monroe Carell Jr. Children's Hospital at Vanderbilt are offering options to many parents of children who need open-heart surgery to offset concerns about 'fitting in' later in life.

"You can't say this is the standard yet, because many surgeons

don't offer this," said David Bichell, M.D., chief of Pediatric Cardiac Surgery. "But we now can do open-heart surgery in a much more narrow opening without changing the safety of the surgery at all."

The standard open-heart incision, basically from the base of the neck to just above the belly, is still necessary in cases where the surgery is risky, the child is particularly sick or there is likelihood that the child might need more surgery later on, but for children who are good candidates, the incision can be made several inches smaller.

Girls have a nice option these days called a sub-mammary scar: a scar that is side-to-side, just under the breast tissue, rather than a vertical scar on the chest, said heart surgeon Karla Christian, M.D.

"It's a big crowd pleaser in the 15- to 20-year-old group [adolescent girls], because it can be hidden with a bathing suit top and leaves no visible scars with a V-neck shirt," said Christian. "Post-operative pain is no different either.

"However, it's really not a good option for boys. As they grow, the scar's effect on a man is that it tends to give them the sense they have breasts. The other thing to bear in mind is the outside scar is the only part that is transverse. On the inside, we divide the chest up and down."

Of course, the best new option is no surgery at all, which has become increasingly possible with round, patch-like pieces of mesh called occlusion devices that can be placed with a catheter through a leg or arm. **VM**

—CAROLE BARTOO

**Tom Talbot, M.D., with
pertussis vaccine.**



DANA JOHNSON

An update on pertussis

BY JOHN HOWSER

It's been the standard treatment for awhile, but Vanderbilt University Medical Center infectious diseases researchers are studying whether health care workers previously vaccinated for pertussis, who are later exposed to someone infected with pertussis, still require additional antibiotics.

At VUMC, the current suggested treatment for a health care worker exposed to pertussis is a five-day course of antibiotics. If they develop signs or symptoms of pertussis, they are furloughed off work and given further treatment while they still may be contagious.

Since the Centers for Disease Control and Prevention (CDC) now recommends vaccination of all health care workers against pertussis, commonly known as whooping cough, what remains unclear is whether antibiotic treatment is necessary, said Tom Talbot, M.D., M.P.H., VUMC's chief hospital epidemiologist and the study's principal investigator.

"If you've been vaccinated you should be protected from

infecting others. You potentially may not need to take antibiotics, and you may not have to go through this whole complicated process," Talbot said.

"But this hypothesis needs to be tested."

Talbot and co-investigator William Goins II, M.D., clinical fellow in Infectious Diseases, are seeking to enroll 1,000 faculty and staff of the Monroe Carell Jr. Children's Hospital at Vanderbilt for this two-year study to test the theory.

The CDC grant for this study is unique to VUMC because the entire study population involves only health care workers at Children's Hospital.

"The reason we picked Children's Hospital is because children still represent the population with the largest number of pertussis infections, and the faculty and employees of Children's know all too well the potentially devastating effects of severe pertussis infection in kids," Talbot said.

Every health care worker who enrolls in the study will receive the pertussis vaccine. Employees who receive a pertussis vaccine through Occupational Health are also eligible to participate.

"One group will receive antibiotics, which is the current, standard therapy. And the other group will be carefully watched, but will receive no antibiotics," Talbot said. "We will watch each group closely for three weeks after exposure, which is the risk period."

The study's outcome seeks to determine if the rate of spread of pertussis to the health care worker, either by outward symptoms, or by positive antibodies, is the same in both

groups. "Will the antibiotics make a difference?" Talbot said.

Pertussis remains a health threat year round. Although a vaccine has been widely used in the United States since the 1950s, the disease remains one of the country's most transmissible infectious diseases.

While children are most at risk for pertussis, the disease is increasingly a cause of infection in adults. It often presents atypically in older persons, with the only symptom being a chronic, persistent cough.

The current vaccine, administered to all U.S. children during the battery of required childhood vaccines, is more than 90 percent effective. Researchers now know the pertussis vaccine remains effective for about a decade.

Talbot says because the incidence of pertussis has been increasing, vaccine manufacturers have developed an effective pertussis adult booster, which is now combined with tetanus booster shots. The CDC recommends this vaccine for all adolescents and adults.

"What has also been increasingly recognized is potential for spread of whooping cough from infected patients to health care workers, who can then spread the disease to other patients, their co-workers, and their families," Talbot said. "This is one of the leading contagious disease exposures seen in hospitals around the world. So it's definitely a problem," Talbot said. **VM**

An accomplished professional

DAVID STERN FONDLY REMEMBERS the many lessons he learned from remarkable teachers during his student days at Vanderbilt. And by teachers, Stern doesn't necessarily mean faculty. One of them was a military veteran with lung cancer.

"I was learning how to do an IV," recalls Stern, M.D., Ph.D., who was honing his physician skills at the Nashville Veterans Administration hospital.

"I tried three times and I missed, missed, missed," recalls Stern, a 1989 Vanderbilt University School of Medicine graduate. By the third stick, he was apologizing and promising immediate assistance from someone with more experience.

"That patient pulled up his other sleeve and said, 'No, son, you need to learn how to do this,'" Stern relates, a trace of amazement still in his voice today. "Here was a guy who had served already, and he was still serving."

The lesson Stern took away from this encounter with a long-ago patient fits well with his philosophy today – that medical school students and faculty members need to recognize that all the people around them can be teachers. For Stern, patients nearly 20 years ago during his training at VUSM, offered lessons he still carries with him today.

"They taught me things I'll never forget," he says. "You learn from patients."

WRITTEN BY **ELIZABETH OLDER**
PHOTOGRAPHY BY **SCOTT STEWART**





Left: David Stern receives his medical school diploma from Dean John Chapman, M.D., in May 1989.

Right: Stern with his father, Thomas Stern, M.D., on graduation day.



Now a physician-educator who studies and consults on professionalism in medicine, Stern advises that what some see as a nebulous trait actually is reflected in most everything a person or institution does – from what doctors wear to how the receptionist treats a visitor to how money is allocated.

“We’re getting some good measures for professionalism,” says Stern, who edited a 2006 book about the subject, “Measuring Medical Professionalism.” Knowledge, communication skills and ethical understanding provide the foundation for professionalism, he says.

“It’s the aspiration to, and the wise application of, a set of values,” he continues, offering a list that includes striving for excellence, embracing accountability, and acting out of humanism and altruism. The third-generation physician saw this behavior modeled by his father, who practiced cardiology in Memphis. And he heard similar stories about his grandfather, one of the first board-certified physicians in the state of Tennessee.

But Stern wasn’t certain medicine was his calling as managed care changed the face of practice in the 1980s. He studied anthropology at Harvard as he contemplated that question, then did choose the family profession. At Vanderbilt, he says, he saw professionalism in action, along with just good Southern manners.

“No Vanderbilt medical student of my generation can forget how they were

told about the Vanderbilt dress code,” he says, recounting how the second-year students filed in front of the new class and yelled in unison, “Dress to inspire confidence.”

“When you dress to inspire confidence, it’s not about you,” Stern says. “It’s about doing what’s best for the patient.” No strict guidance came with that advice, but tips often were offered about beards and borderline decisions, he recalls.

“The training in professionalism that I received at Vanderbilt was wonderful,” Stern says. “I certainly feel like I behave as a physician, in part, because of the way I was taught at Vanderbilt.”

As he was finishing his residency in internal medicine at the Tufts/New England Medical Center in Boston – “I was trying to figure out which organ to pick” – Stern decided to ask himself a different kind of question.

“What do I enjoy doing?” was the inquiry. The answer: “What I enjoy is teaching,” he says. That’s how he ended up earning a doctorate in curriculum and teacher education at Stanford University and doing research on the professional behavior of physicians. He continues to practice general internal medicine at the VA Medical Center in Ann Arbor, where he also teaches residents and medical students. He has worked on a project that assessed the quality of medical education in China’s top medical schools. And at the University of Michigan Medical

Stern with a visiting student at the University of Michigan Medical School.

School he directs Global REACH, a program that fosters international faculty exchanges and research collaboration.

As in Stern's medical school days, professional behavior is still transmitted to medical students through the "hidden curriculum" – what's modeled by their mentors and valued at the institution where they train. When those modeled messages are good ones the result is positive, Stern says, remembering how in one workshop he was leading, a faculty member said he taught compassion by putting students on call only every fourth night.

"You have to treat people better so they'll learn to treat others better," he says.

He acknowledges that, in medicine, this goal is complicated by the challenges faced every day by the doctors, nurses and others on the front lines of patient care.

"We're dealing with people who are sick and dying," he says, which can take a toll on even the most compassionate caretaker. Some hospitals are trying interventions to help workers deal with the stresses and keep them in touch with their humanity. These include building in "reflective time" to discuss difficult issues with colleagues and promoting "mindfulness" while interacting with patients. Stern says the students who participate in international rotations of the Global REACH program that he directs at Michigan learn this lesson when they practice in cultures that lean less on modern technology.



SCOTT STEWART

At academic medical centers, where tomorrow's doctors are made, Stern believes it's imperative to show support for teachers and the critical role they play.

"They learn to be present and care for patients," he says, an experience that also teaches them the meaning of "caring versus fixing."

While the managed care reimbursement system can shortchange those who spend more time with patients, Stern says following the "in and out as fast as possible" philosophy can lead to lost patients as people become dissatisfied with superficial care.

"The push for productivity has to include quality indicators," he explains.

"The system needs to support the humanistic and professional behavior of doctors," he says, which means ensuring appropriate compensation for those who spend time teaching, in addition to those who are more engaged in the revenue-producing areas of research and clinical care. "You want doctors to be rewarded equally for all those things," he asserts.

"What is required is a broader vision on the part of those who are thinking that the volume of patient care is all that counts."

In the end, institutions are responsible for creating the climate and leadership they wish their students and employees to emulate, Stern says. At academic medical centers, where tomorrow's doctors are made, he believes it's imperative to show support for teachers and the critical role they play.

"You should try to create incentives that are consistent with the values of the institution," he says. And while research and clinical care are integral parts of academic medical centers, Stern thinks teaching should be valued as a key mission.

"The only thing that we do that is unique is teach," he says. **VM**



John Doe
School of Medicine
Medical Student
Vanderbilt
UNIVERSITY
Vanderbilt University
Vanderbilt University

A new way
of training doctors

too much INFORMATION

Medical School Dean Steven Gabbe, M.D., tells a story about how one veteran Vanderbilt student initiated a first-year class: “He put a grape on the table and told them, ‘This is your brain.’ Then he held up a cantaloupe and said, ‘This is what you have to learn.’” And then he smashed the grape with the cantaloupe.

WRITTEN BY **ELIZABETH OLDER**
ILLUSTRATION BY **PETE McARTHUR**

An attention-grabbing demonstration,

without a doubt; intimidating, maybe just a little scary. But, actually, quite a right-on-track representation of a roiling undercurrent in medical education in America today. The people in charge of shaping new doctors are reconsidering just how much stuff should get crammed into students' brains and if long-held ways of doing that actually are producing the intended results.

"You can't learn everything," observes Gabbe. "You need to know where to go to get the information and, when you get it – and this is really important – how to evaluate the information."

Now co-chair of the Liaison Committee on Medical Education (LCME), which oversees accreditation of M.D. degree programs, Gabbe has spent a lot of time in meetings with colleagues dissecting the state of physician training. He sees a gathering movement toward doing it differently, as medical schools across the country work toward and implement changes in what and how they teach to better serve both students and patients. This movement reflects the premise of a recent article in the *New England Journal of Medicine*, which said the current approach to medical education is "inadequate to meet the needs of medicine" and should be overhauled as we approach the 100-year anniversary of the "Flexner Report," the 1910 Carnegie Foundation-funded study that shaped the

medical school curriculum in America. (see page 19)

The stresses on the system have compounded rapidly in recent decades – faculty torn between teaching and revenue-producing clinical duties, patients who are much sicker by the time they come for care, and a health care reimbursement system that often balks at paying for the treatment. And doctors have to understand how to interact with a patient population that is becoming much more culturally diverse.

"On the other hand, this is an incredibly exciting time in medical education," says Gabbe. "We recognize the practice of medicine has changed."

Vanderbilt Vice Chancellor for Health Affairs Harry Jacobson, M.D., points to the "tremendous explosion in diagnostic and medical tools" as one reason educating medical students is getting more and more challenging. And, he adds, biomedical research has "expanded exponentially" what we know and must teach in the molecular and cellular sciences.

"I think medical education, historically, has been preoccupied with stuffing the heads of medical students with as much content as possible," says Jacobson. "The amount of that content is growing at a very rapid rate."

When Abraham Flexner visited every U.S. medical school and proposed the teaching structure still guiding the way doctors are trained today, knowledge was

much more limited, Jacobson observes. While teaching the basic sciences remains important, he says, "What you really have to do is teach people how to find information."

The more we know, the more we learn

At an unprecedented rate, revelations from ground-breaking research and rapid advances in technology and pharmacology are piling on the knowledge and skills that medical students must learn. At the same time, educational research into how to most successfully teach has gained a fresh respect from medical school leaders who realize that not all good doctors do a good job of sharing and assessing knowledge.

"We can't turn the clock back," observes David M. Irby, who was one of four co-authors of the *NEJM* article, which led off a series of reports on medical education. "What we can do is rethink the structure of what we do... What we are trying to say is we can do better, and we need to do better."

As the vice dean for education and a professor of medicine at the University of California, San Francisco School of Medicine, Irby is something of a pioneer in the field of training doctors – and a colorful commentator at that. He holds a Master of Divinity and a doctorate in education, but has no medical degree. The Carnegie Foundation Senior Scholar has likened medical education to trying to drink from a fire hose or being thrown into a lake and told to swim to all shores at once.

"That's because, at least in the first two years, what you have is a fixed amount of time with a geometrically increasing amount of information to cover," explains Irby. "The faculty response to that is to fill it more and more with microfacts and hope the students will absorb them."

In education circles, this is known as "front loading," Irby explains. Front loading is sparked by the teachers' feeling that this is their last chance to give the students all they need to know in order to succeed.

"What we know is, it doesn't work,"

Dean Steven Gabbe, M.D., in the new Medical School space under construction atop Langford Auditorium.

ANNE RAYNER



observes Irby. “It doesn’t work because you forget that which you don’t use.”

Moreover, Irby is no fan of the common curricular approach of dividing the basic sciences by departments and grouping all those topics into the first two years of medical school.

“The idea was that sharing a little about each of those would somehow train you to be a physician,” he says. “Well, it doesn’t, actually.” Students must be given opportunities to link related scientific knowledge with clinical practice in order to really understand how and when it applies to patients, he explains.

This fault in medical education – cramming students’ brains with basic science then throwing them into patient care where they must put facts to practice for the first time in one specialty area after another – has led a number of medical schools to reassess how students are being trained. Some already have made changes aimed at integrating related basic sciences and connecting the content to hands-on clinical practice, and others are moving in that direction.

“We need to organize content in meaningful chunks and connect it to patient care,” explains Irby. “It’s knowledge for use and not knowledge for regurgitation.”

Vanderbilt Medical School already is making changes in its curriculum to reflect this premise, building science study and

clinical experiences into all four years of medical training, says Gabbe. (*see page 20*)

“Students learn best when they can combine basic science and clinical cases,” he explains.

The new curriculum is being phased in through August 2008. It features integrated courses organized around related science topics and care issues, review-intensive intersessions, and a fourth-year capstone course that lets students focus on their chosen field of study. The Emphasis program, already in place, is unique to Vanderbilt, giving students the chance to do self-directed research under the supervision of a faculty mentor in the first two years of medical school.

New technologies have been put to use throughout the curriculum. Students train on simulated patient dummies, build an electronic log of their clinical experiences, and practice diagnosis and communication skills on “standardized” patients – actual people who pretend to be sick. The

students discuss medical issues in the 21st century in a two-week course that includes such topics as evidence-based medicine, professionalism, cultural competence and communication skills.

And the medical school has designated 13 master clinical teachers who will devote more time to mentoring students and fellow faculty members. Similar positions in the basic sciences are planned, says Gabbe. An additional \$1 million has been earmarked to support teaching in the new curriculum.

“Teaching is an important component of what we do,” Gabbe says.

But do all smart students make good doctors?

Medical educators would no doubt agree it is a daunting task to give medical students all the knowledge and experience they will need to go out into the world and care for patients on their own. But this expectation seems quite concrete when

Learning to communicate

Mrs. C is a 79-year-old with osteoporosis admitted with a hip fracture due to a fall. She fractured her other hip six months ago also due to a fall. She underwent a series of evaluations and tests to determine why, but nothing specific was identified. You decide to discuss the falls with Mrs. C who herself isn't sure why she is falling. You speak with her and determine there are no obvious explanations. Then Mrs. C asks, "Couldn't we talk later? Having to think about falling just worries me. Let's talk later." Do you respect her wishes or do you continue to probe?

CASES LIKE THIS are the reason that Vanderbilt University School of Medicine is weaving communication skills throughout each year of its curriculum. The faculty wants to ensure medical students learn about this powerful tool, which will result in producing more accurate diagnoses, more effective treatments and stronger patient relationships.

"Most medical school students have good communication skills; the key is to enhance those skills," said Lynn Webb, Ph.D., VUSM chief of staff. "We have always emphasized techniques of differential diagnosis and the importance of scientific knowledge in our curriculum. We are making communications just as high a priority."

The VUSM strategy is to build on the communications training it has offered fourth-year students by providing comprehensive coaching, role playing, presentations and standardized patient experiences throughout a student's entire medical school career.

"Our goal is to use various conversational approaches, learn to ask the right questions and allow the patient time to answer. All of this

establishes a patient partnership with the family and promotes optimal health," said Gerald Hickson, M.D., associate dean for Clinical Affairs. "There is growing empirical data telling us effective communication leads to positive outcomes."

For the past three years, VUSM faculty and administrators have been developing the best approach for teaching communications to future physicians. They began by searching for a communications language similar to the language or systematic approach for conducting a typical physical exam.

This research resulted in the adoption of several elements of the Macy Model, a set of structural and sequential guidelines for effective doctor patient communication. The model has outlined fundamentals for the interview process which include allowing patients to express themselves by communicating with them in a supportive attitude, accurately recognizing patient emotions and feeling, and being organized and logical.

"We want to help emphasize the importance of communications from the first day they start classes

through to graduation," said Webb. "That way, they'll have a better understanding and have an effective mental outline they can use when interacting with patients."

First-year students will learn to understand psychosocial issues and to look for clues to enhance patient responses. Second-year students will focus on gathering information via open-ended questions that will aid in diagnosis. Third- and fourth-year students will concentrate on how to use communication as part of care and treatment plans as well as how to handle difficult conversations with patients including disclosing medical errors.

"In addition to the conceptual model, you have to engage the students in a way that turns them from passive learners to active participants," said Hickson. "No one wants to hear someone lecture for an hour about how to communicate. The most effective approach is to use case studies and make them as interactive as possible to prepare students for the one-on-one discussions they will have with patients and their families."

VUSM students hone their communications skills

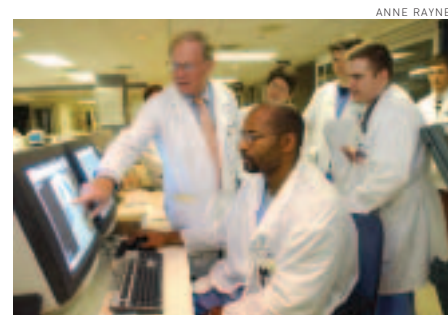
through a variety of interactive exercises. Case studies taken from real situations provide an opportunity for involvement and audience response systems heighten learning while maintaining student anonymity. Students have opportunities for role-playing as physician, patient and family member to gain better perspectives of the process.

Standardized patients, actors who assume different personalities and symptoms, are also a new tool in teaching the patient/physician dynamics (see page 36). Faculty will assess student interaction with the standardized patient and often give the student a chance to re-perform the exercise as many times as needed.

"As we build into a four-year program, we'll be changing and revising and being able to give our students sophisticated skills so they are more adept at communicating with the entire health care team as well as families," said Bonnie Miller, M.D., associate dean for Undergraduate Medical Education. "Our hope is that these lessons of communication will stay with our students through residency training and their entire careers."

— KATHY RIVERS

The way students are taught has changed since 1928 (left), but one thing has remained constant: the importance of educating the best medical students in the nation.



compared with what some see as an even greater failure in physician training – instilling professional attitudes and behaviors that make compassion, communication and commitment to the patient the paramount guiding principles.

Vanderbilt medical school graduate David Stern, M.D., Ph.D., has put a lot of thought into how to define and teach professionalism. He edited the 2005 book, “Measuring Medical Professionalism,” has written many papers on the subject and consults with groups and institutions trying to get a grip on the trait that traditionally has been transmitted primarily through role modeling.

Now a staff physician at the Veterans Affairs Medical Center in Ann Arbor, Mich., Stern also pursued his interest in teaching by earning a doctorate in curriculum and teacher education at Stanford University.

“It was there that I learned about this thing called the hidden curriculum,” he explains. The term refers to all the things that students get taught through observing their teachers – the implicit rules, the informal education, the unwritten expectations.

“What I realized was that professional values were being taught in the hidden curriculum,” says Stern, who also teaches medical students and has administrative roles at the University of Michigan Medical Center. And while that approach can produce compassionate, humanistic physicians – he feels it did for him – Stern says institutions must work

to create an environment that inspires and recognizes professionalism, an administrative climate that supports it, and leaders that consistently model it.

“It’s easy for us to look back on the golden days,” says Stern, who questions whether professional behavior was all that perfect then. “We just have a different set of issues today than we used to have... The question now is how to change the environment to induce professional behavior. You can’t change the hidden curriculum. That would be tilting at windmills.”

Gabbe agrees that positive role models are the best tool to impart lessons of compassion and humanism to medical students, noting that many choose their specialties because they are inspired by a beloved teacher. But the flip side, he says, is that bad role models can just as easily teach unprofessional behavior.

“We have to make sure we address these issues,” he says, noting that small-group discussions and classroom interaction are good tools. “I think that’s one of the most important changes in medical education – this idea that recognizing professionalism is just as important as understanding the metabolism of glucose.”

He suggests that complete “standardized families” could be used to give medical students the chance to role play such difficult duties as delivering bad news about a loved one and asking about organ donation.

“I think it’s important that you have

a chance to practice that before you’re put in that situation,” says Gabbe.

Advances in life-sustaining technology, a growing group of aging baby boomers and the high cost of health care will continue to complicate decisions that doctors must make about patient care, he says.

“There is a lot more we can do, and our ability to do it creates a lot more difficult ethical questions,” he observes. Discussing these issues openly with students is important, he believes.

“I think what we need to do is clearly give the students the principles of how physicians behave,” Gabbe says. “You hope that then, when the students get into those situations in the real world, they will handle themselves more effectively.”

A new roadmap, a shared commitment

So almost a century after the Flexner Report defined how doctors should be trained, the academic health care community seems to largely agree that medical education – not just at the undergraduate level, but also residency training and continuing education – is in need of a new roadmap. Over the past few years, many committees have been convened and hundreds of words have been written to address the issue.

But if this widely discussed goal is to be gained, many in academic health care see the need for all parties involved to share two commonly coveted commodities: money and power.

But even with these challenges, experts say the re-examination and innovation going on in medical education today is moving the field forward and promises to provide a stronger framework for training physicians in the years ahead.

Academic medical centers must commit to financially support the extra time and expert faculty needed to train students, in addition to emphasizing revenue-producing clinical and research activities, says Irby. And students should train in a variety of clinical settings, not just in hospitals, he says.

“Instead of the old community teaching hospital model, today it’s like one massive intensive care unit,” Irby observes. “Is that the best place to train students?”

And academic centers need to embrace the idea that research and patient care are perhaps not the most inherent responsibility they have, says Stern.

“The unique intellectual property of an academic medical center is medical education,” Stern suggests.

But this vision may require a commitment based on principle, since the value of medical education – which costs more than the thousands of dollars students pay in tuition – can’t be measured on an annual balance sheet.

“The value is long-term,” observes Gabbe. “It isn’t for many years that you see the fruits of your labor.”

Jacobson hopes to see more teamwork in the health care community. Doctors, nurses, pharmacists and other health care professionals need to be cross-trained – perhaps in some common classes – and empowered to share the duties of some standardized, evidence-based care, he suggests.

“Doctors still perceive that they are the center of the health care universe,” Jacobson asserts. “Health care is a team sport, and we don’t optimally work in teams. I think we’ve never worked well

in teams, but the challenges are getting bigger and working in teams is becoming more important.”

And medical school departments need to learn to let go of segregated, quick-turnaround clerkships, says Irby, which he believes barely give students time to acclimate, let alone learn much medical content or skills.

“Why do we think it’s a good idea to essentially kill off our students?” he asks, noting the overwhelming fatigue, frustration and, often, depression, caused by this traditional training system. Residency training needs the same attention, he adds, since it has been organized primarily to meet the service needs of hospitals or fulfill accreditation requirements, rather than to teach and reinforce the skills neophyte physicians need to know.

And in the bigger picture, the various overseers of medical education are still struggling to reach common ground when it comes to creating a seamless plan for educating America’s physicians.

“Somebody has to lead,” says Jacobson. “I don’t see any leadership.”

“Nobody is in charge,” says Irby, who likens the “house of medicine as being this monster umbrella group” sheltering the different regulatory and accrediting bodies.

“Each subgroup is doing the very best it can, but they each have a different set of standards and criteria that are not necessarily congruent,” Irby explains.

“It’s a little bit like patients having multiple specialists working with them,” he surmises, when those in charge end up not talking to each other and, as a result, “the drug interaction ends up killing the patient.”

“Nobody is looking out for the patient and nobody is looking out for medical education... The challenge is, there’s just no forum to do that,” Irby says.

The LCME accreditation committee recognizes the problem and has made some efforts to bring together the divergent parties to consider the challenges in medical education, says Gabbe.

“I think we all need to work together,” he observes. “I think we have a long way to go.”

But even with these challenges, experts say the re-examination and innovation going on in medical education today is moving the field forward and promises to provide a stronger framework for training physicians in the years ahead.

The president of the Association of Academic Medical Colleges, Darrell G. Kirch, M.D., thinks Abraham Flexner would be excited by the innovations in medical education in the last few decades.

“I am certain he would commend us on our progress, but also demand that we not rest on our laurels, encouraging us to redouble our efforts and challenging us to explore new frontiers of innovation,” he writes in the *AAMC Reporter*.

“I’m optimistic that things will continue to improve, to get better,” says Irby, who will keep on looking at the subject through an educator’s lens. “As with anything, there are good sides and bad sides and challenging sides. It’s a full-career opportunity.” **VM**

Abraham Flexner



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The staggering consequences of one, simple report

Few know it by its official name, the Carnegie Foundation's "Bulletin Number Four." To most, it's simply the "Flexner Report." But either way, there's no argument about the stern message delivered by the 1910 book-length report, a complete indictment of the system of medical education in the United States and Canada and one of the most important publications on medical education in the 20th century.

In his report, Abraham Flexner, a secondary school-teacher and principal from Kentucky, concluded that most medical schools were set up not to train students to be doctors, but instead to give its faculty a supplemental source of income. Flexner said there were too many doctors in America and too many medical schools. Few medical schools had any admission criteria, and there was not enough equipment for training.

Flexner visited nearly half of the 155 medical schools in the United States and Canada, including Vanderbilt's. Prior to the "Flexner Report," he had written a critique of the

American college system, and it caught the eye of some influential people at the Carnegie Foundation. They asked him to do the report.

"At first he said 'you have me confused with my brother, Simon [a professor of Pathology who went on to become the first head of the Rockefeller Institute]," said John Flexner, M.D., professor of Medicine, Emeritus at Vanderbilt, and Flexner's great nephew. They told him 'we don't want a scientist, or a doctor. We want an educator. We want you,'" John Flexner said.

Accompanied by an American Medical Association representative on many of his trips to medical schools, Flexner, known for his bluntness, wasn't kind in his assessments of individual schools.

"If you paid your tuition to a medical school, you didn't have to go to class or do a damn thing," John Flexner said. "And in a year or two, you were given a diploma and a right to practice medicine. There were no entrance requirements. There were no boards, nobody looking at what you did.

"He pretty much thought they were all bad except for Johns Hopkins," his great-nephew said. "That was his role model. They had two years of basic science and two years of clinical, and that's

what it (medical education) has been up until the last 20 years when people started playing around with that."

In his report, Flexner said that California Baylor was a "disgrace to the state," and that Washington University Medical School in St. Louis "must be either abolished or reorganized." He said that Tennessee contained more "low-grade medical schools than any other Southern state," including those in Knoxville and Chattanooga that he described as "utterly wretched." Flexner said that of Tennessee's nine medical schools only Vanderbilt should be continued, although he criticized the school saying it had no full-time faculty and that the entrance requirement was "less than high school graduation."

"He singled out Vanderbilt as the very best in the south, but many believe that [Vanderbilt Chancellor James] Kirkland, who was a lifelong friend, had a lot to do with that," John Flexner said.

The "Flexner Report" had some staggering consequences. Of the 155 medical schools before the Flexner Report, more than half closed after the report. It triggered much-needed reforms in the standards, organization, and

curriculum of the remaining North American medical schools. Flexner proposed that medical schools operate instead in the German tradition of combining strong biomedical sciences with hands-on clinical training.

The report was most definitely on the mind of G. Canby Robinson, M.D., who was appointed dean of Vanderbilt's medical school in 1920. Five years later, with the help of funding from the Rockefeller Foundation General Medical Education Board and the Carnegie Foundation, the School of Medicine was relocated to a new building on the Vanderbilt main campus (now Medical Center North) that housed the school, the hospital, outpatient clinics, laboratory and library.

John Flexner said his great uncle, who went on after the Flexner Report to raise \$500 million for medical schools, would probably applaud the changes that are taking place in medical education today. "I think he'd say 'you have to go with the flow.' He'd say 'what I did for that day was appropriate. Now it's not.'"

- NANCY HUMPHREY



A fresh palette

THERE'S A "BUS" PARKED IN FRONT OF THE Vanderbilt University School of Medicine with the phrase "Curriculum Revision" on the outside. Some faculty and clinicians are anxious to be first in line; others would prefer to walk.

Associate Dean for Undergraduate Medical Education Bonnie Miller, M.D., is driving the bus. It's her job to get as many people "on board" as possible. One of the questions she will have to answer: why is a curriculum change needed when many of VUSM's graduating students are already being courted by the nation's top hospitals?

"It's not that we haven't done a good job. We are consistently training wonderful people and wonderful graduates," Miller said. "But there is always room for improvement. To be an outstanding physician in the 21st century, it is going to take a different skill set than we have taught in the past."

The situation is all too familiar to Gail Morrison, M.D., vice dean for Education and director of the Office of Academic Programs at the University of Pennsylvania School of Medicine. She led curriculum changes for her medical school in 1997.

WRITTEN BY **CRAIG BOERNER**
ILLUSTRATION BY **STEVE DININNO**

“The feeling was that the world of medicine had changed,” Morrison said. “Initially our faculty were saying, ‘don’t change anything.’ Nobody wanted anything changed because it was working ... and it was working, but it just wasn’t going to work well in the future.”

Morrison created a sense of urgency at Penn when she hired a leading businessperson from Wharton to give a 45-minute lecture on change to her leaders.

“He talked about change in corporations, very specific corporations who saw the writing on the wall, but didn’t change,” she said. “You could have heard a pin drop in that room. It was a fascinating talk because it had nothing to do with medicine but it had everything to do with the real world.”

Student performance and recruitment have risen at Penn since implementation, Morrison said.

Steven Gabbe, M.D., dean of VUSM, told students during his spring State of the Medical School address that the changes under way at Vanderbilt have not discouraged prospective students from coming here for their medical education.

“Interesting. Not only hasn’t this discouraged students from coming here, but we think it has encouraged more students to come here,” he said. “What we are trying to do is increase the relationship, or the interaction, by bringing together basic science and clinical practice throughout the four years of medical school.”

Instituting change

On a sunny March morning Anderson Spickard III, M.D., caps a dry erase pen and glances out the seventh-floor window of his Medical Center East office, perched directly across from Vanderbilt University Hospital. He has finished explaining one of several components associated with the new curriculum, which represents the first expansive changes to Vanderbilt’s medical education in more than four decades.

The revisions are intended to prepare today’s doctors with modern-day skills in areas including communication, teamwork and information technology.

Educational changes taking place at medical schools across the country are intended not only to produce smart doctors, but also doctors who will be responsible for the health of the populations they serve.

Spickard, a second-generation Vanderbilt physician, wears many hats as it relates to these changes – Executive Committee member, Master Clinical Teacher, clerkship director, team leader for the Knowledge Map and Learning Portfolio initiatives.

He was instrumental as the new third-year clerkship was instituted with great reviews last summer and will continue to be involved on many levels as matriculating students experience the new first year this August, and as the two classes move on to the next years.

On this day he changes his proverbial hats like a Nashville driver changes lanes during rush hour on Interstate 65. There’s a lot to cover and not much time.

“There is nothing better than having a student with a patient in a mentored environment,” he says. “The things we are doing are good as long as they complement and don’t replace a real-life patient interaction.”

The first and second years

Educational changes taking place at medical schools across the country are intended not only to produce smart doctors, but also doctors who will be responsible for the health of the populations they serve.

That process begins in the first year, when these top-notch students accustomed to great successes are thrown into a soup of equally successful persons from all over the world.

It can be intimidating.

First-year team leader Neil Osheroﬀ, Ph.D., said those first weeks can be unsettling, knowing that you are sitting next to (and competing against) Olympic athletes, concert violinists and Navy fighter pilots with over 1,000 carrier landings who are coming to class with a different level of

maturity due to their past experiences. Roughly one in every 44 applicants is accepted to VUSM.

“Our students are all very high achievers and have spent most of their lives at the top of their food chain,” Osheroﬀ said. “They show up here and they find out that they sometimes are a medium-sized fish in the Vanderbilt pond and that there are killer whales and great white sharks out there.”

The transition from undergraduate to medical student is very difficult and it is important to ease students through this critical period with a strong initiation into their four-year journey.

The first component of the new first-year curriculum is a two-week “Foundations of the Profession” course, which Miller will teach. It will prepare students for their entry into the medical profession by providing an ethical and historical context for the practice of medicine.

From Miller’s class students will begin blocks with courses that have been integrated across disciplines.

“The first two years have been turned on their heads,” Osheroﬀ said. “We are going from semesters to blocks, and are moving to interdisciplinary courses, most of which are totally new.” Osheroﬀ has taught Biochemistry for 17 years and is one of only two directors in the past 49 years of that class at Vanderbilt. His course is being replaced in August with Molecular Foundations of Medicine, an interdisciplinary course that encompasses Biochemistry, Cell Biology and Genetics.

“In the past each course was nicely integrated within itself. In the new curriculum, there will be considerably more integration between subjects and disciplines. Courses may still be islands, but they will be connected with wide and well-traveled bridges,” he said. The first-year team is

Some of VUSM's curriculum revision team (left to right): Neil Osheroff, Ph.D., Jim Atkinson, M.D., Ph.D., Ban Allos, M.D., and Bonnie Miller, M.D.

ANNE RAYNER



submitting its schedule to both second-year and clinical years directors to make sure students are being prepared adequately for what lies ahead.

"I have been teaching at Vanderbilt for 24 years and, all of the sudden, there will not be a student who will have ever taken any of the courses we are giving them in the first two years. How is that for working without a net?" Osheroff asked.

"We are very excited about our new courses. The students will get a quality product, I guarantee it."

At the end of each block students will participate in weeklong intersessions, led by Scott Rodgers, M.D. Each intersession will explore a topic that has been presented in the previous block, allowing comprehensive integration of the basic science they have learned with clinical and societal perspectives.

A 17-week "Structure, Function and Development" course, which spans the winter break, will integrate anatomy, physiology, histology and embryology into a more systems-based approach.

The new "Patient, Profession & Society" course for both first- and second-year students covers topics not typically included in classic basic science education – medical economics and ethics, communication, psychological and social dimensions of health and illness, epidemiology and preventive medicine.

"By joining five different courses under this larger umbrella of PP&S, there is an effort to meld these insights and perspectives and knowledge bases into a coherent delivery package for the students," said PP&S course director Larry Churchill, Ph.D. "Part of this is didactic, a great deal of it is small group teaching, and some of it is also field experience."

Churchill's course will place an emphasis on chronic illness, a major

component of the curriculum change that also threads through years three and four.

"Most of the illnesses that patients see physicians for now are chronic in nature; it's not getting an antibiotic and you walk out and you are fine," Churchill said.

"These are ongoing kinds of conditions that require some degree of management, a lot of patient understanding and cooperation with their course of treatment."

Didactic sessions will provide students with a knowledge base of these topics that allows them to appreciate and understand what they are hearing when they interview chronic illness patients in their home setting beginning in year one.

"If you interview a patient in their home, you are seeing them in the context of their living environment, their working environment, the nest in which they do well or don't do so well," Churchill said. "We are trying to train health professionals to look at the larger social, economic and psychological picture of the environment in which the patient lives."

Students will also rotate through a variety of chronic illness clinics to see and understand illness over a span of time. "I think it is going to be terrific in

terms of putting flesh onto the kind of structural bones that students are being inundated with in years one and two," Churchill said.

A six-week block of Microbiology and Immunology will complete the first year curriculum. This course will continue to employ a variety of teaching methods in its presentation of infectious agents and the body's response to them.

Second-year curriculum changes will be similar to the first year in that individual departments have traditionally taught the classes – Pathology, Pharmacology, Radiology, Laboratory Diagnosis and Nutrition – but now they will be melded together into a 25-week curriculum.

"At first blush it doesn't seem like Pathology and Pharmacology would have much in common," said second-year team leader Jim Atkinson, M.D., Ph.D., "But, as we have gotten into this process, it has actually been interesting to see how they do overlap and it is really making sense now as things are being put together."

Students also participate in the Emphasis program during their first two years, which allows each to undertake a mentored scholarly project in an area of



Bonnie Miller, M.D.

“We have learned a lot about how people learn. Students learn better if the material is presented in the context in which it will ultimately be used.”

individual interest. Students present their work at the end of the second year.

A change in teaching, too

Not only has the medical knowledge itself evolved over time but the delivery of that knowledge is also changing.

“We have learned a lot about how people learn. Students learn better if the material is presented in the context in which it will ultimately be used,” Miller said. “We want to more fully integrate basic clinical medicine into the teaching of basic science because it will be easier for students to remember and retrieve if presented in the context of those clinical cases.”

Even lectures can become active learning experiences with the use of technologies such as audience response systems.

“Many of us have taught for years, but we haven’t really thought about the science of teaching,” Osheroff said. “We all taught, and we thought we did it well, but was it based on the scientific theory of teaching? An interesting door opens once you say ‘All bets are off’ and start all over again.”

Historically the medical school has not used computers to their full extent, but the utilization of new information

technologies specific to Vanderbilt should make learning more efficient.

One example is Knowledge Map, which allows students to track lectures and course directors to see what students are learning in other courses.

Searches are performed through a Vanderbilt product known as the “Concept Indexer,” which finds all of the concepts of the National Library of Medicine.

During the clinical years students are required to do various evaluations with a written component – history and physical examinations, progress notes, procedure notes or discharge summaries – that, in the past, served more as a personal log than a mentored assignment.

Those evaluations are now captured electronically by Learning Portfolio, which allows students to monitor their progress over time and master clinical teachers to instantly see what students have covered and adjust their experiences accordingly.

“You can start to individualize an education program for each student,” Spickard said. “It may be that we cannot provide every experience with a particular case but we have the opportunity with our standardized program to use patient actors to provide cases for students. We

can complement the lack of real life experience with simulation.”

The revisions also took into account that the third year was mysteriously four weeks shorter than that of nearly all other medical schools.

“Sometime back in the 1980s the School of Medicine began using two start dates, one in August and one in July,” Gabbe said. “We found the third year was four weeks shorter so we were able to add four, one-week intersessions in the new curriculum.”

Intersessions are weeklong interludes that provide students the opportunity to explore cross-disciplinary topics such as communication skills, medical systems, women’s health, geriatrics, palliative care, preventive medicine and nutrition.

The second half of each intersession allows students to review the basic science concepts pertinent to the clerkship they are about to begin.

Third-year Intersessions Course Director Kimberly Lomis, M.D., said the surgery-specific portion of the intersessions, for example, introduces students to techniques important for examining patients who are in pain, whereas most of their prior experience in Physical Diagnosis did not include interacting with patients in acute distress. “We worked with the Center for Experiential Learning and Assessment to develop standardized patient experiences,” Lomis said. “The students commented that these scenarios were quite realistic and helped them practice comforting and assessing such patients prior to starting on the wards.”

Fourth-year students will be re-exposed to the basic sciences at the end of their medical training through a new Capstone Course.

“I remember the anxiety I felt going out on the wards as an intern in medicine,” Gabbe said. “I spent quite a bit of time by myself reviewing and writing it all down in a black book. Here is an opportunity for everyone to come together and have a review of the basic sciences and apply them to their specialty.” The four-week course is taught in February, just before

graduating students begin their internships. It will examine two cases per week with days divided between small groups, lectures and individual scholarship.

“The course will focus not just on an individual patient with a specific disease, but about the context of that illness from its very basic pathogenesis to its public health impact. We’ll look at the disease from the molecular and genetic level all the way to the perspective of the World Health Organization,” said Ban Allos, M.D., director of the Capstone Course.

Is traditional medicine the only way?

Because patient demand for complementary and alternative medicine (CAM) is on the rise, some medical schools are looking at increasing its content in the curriculum, but they are unsure of how and where it should be added to an already full, demanding four-year curriculum and who should teach it.

As part of her Emphasis Project, a concentrated study which is required for first- and second-year medical students, Vanderbilt second-year student Sara Risner-Adler conducted a survey of four medical centers that are incorporating CAM into their curriculum to determine the best way to introduce it so that the greatest number of students can have access to it.

“I wanted to look at medical education, focusing on how to change it to bring in integrated health,” Risner-Adler said. “My interest is in preventive medicine, and my college major was in nutrition, so I wanted to focus my research on how I could change medical education

“The purpose of the course is going to be to engage the students in scholarship. Students may choose to delve into any area that strikes their fancy. As long as they are excited and passionate about what they are reading and what they are learning, then it is fine by me.”

Smooth sailing ahead?

With all of the changes throughout the four years there are sure to be some heated discussions and roadblocks along the way.

Morrison’s advice to Vanderbilt is to keep the faculty involved throughout the process. She said she knew things were

starting to come around at Penn when the basic scientists and clinicians started sitting next to each other at the meetings.

“They would tell me that they actually spoke to each other outside of the meetings because they didn’t want to wait until the next meeting,” she said. “And then it was, ‘We are actually going to do something together in research.’”

“This is faculty-driven so they have to be on your side. You have to have that group who really are your supporters and really want to do it. And then you have to give them the full credit for doing it. They are the reason why you will succeed and then they will get other people on the bus for you.” **VM**

to offer improved quality of care to patients.”

Risner-Adler says complementary medicine, such as aromatherapy, is used together with conventional medicine while alternative medicine is used in place of conventional medicine. An example of an alternative therapy is using a special diet to treat cancer instead of undergoing surgery, radiation, or chemotherapy that has been recommended by a conventional doctor. Integrative medicine combines treatments from conventional medicine and CAM.

According to Risner-Adler’s research, medical education began to embrace CAM curricula in the late 1990s, increasing from 21 percent (1995) to 64 percent (2000) the percentage of U.S. medical schools offering CAM. The rationale for doing so includes a growing number of patients using the therapies; medical schools are defining their missions of health care in broader terms conceptually similar to those embraced by integrative medicine; exploring CAM therapies will direct

productive biomedical, psychological, socio-medical research agendas and the knowledge of the patient’s CAM use builds a stronger patient-physician relationship.

Risner-Adler chose four medical centers listed in *U.S. News and World Report’s* top 50 medical centers that are also members of the CAHCIM consortium and offer complementary and alternative medicine curriculum courses. She conducted 30- to 60-minute phone interviews with at least one of the integrative medicine curriculum directors at each model program. The four programs require from 10-21 hours of CAM curricula.

“Most of what other medical schools have done is offer electives in CAM,” she said. “What I was interested in is the best way to bring this information to the largest percentage of students – not just ones who elected it.”

Her conclusion is that integrated medicine is most successfully taught in the context of chronic illness care and prevention curricula and most importantly, faculty development plays a key role in introducing CAM into medical school curriculum.

“The model schools started their educational initiatives with their deans saying that this is what we need to do, not from students saying this is what we want. They started by getting NIH educational grants to see how to best make a change in their curriculum. Most importantly, what I learned is that faculty development is the key to curricular reform,” she said.

Bonnie Miller, M.D., Associate Dean for Medical Students, said that the new Integrated Health Center at Vanderbilt is one step toward exposing students to CAM through electives, but at this time, there are not plans to make it a “major curricular thread.” **VM**

– KATHY WHITNEY

MEDICINE

+++
PLUS
+++

Dual-degree, research programs let
students blend passions

WRITTEN BY **NANCY HUMPHREY**
PHOTOGRAPHY BY **TAMARA REYNOLDS**





+++ IT'S UNLIKELY THAT RICKY SHINALL WILL EVER WEAR A PASTORAL COLLAR AND DELIVER A SERMON FROM THE PULPIT, BUT THEN AGAIN, **ANYTHING IS POSSIBLE** SINCE HE'S BLAZING A NEW PATH AT VANDERBILT UNIVERSITY SCHOOL OF MEDICINE.

Shinall is the first medical student to enroll in a joint M.D./M.Div. program at VUSM, a school that embraces the opportunity for its students to explore options other than the traditional M.D.-only degree. The school has 44 students pursuing the M.D./Ph.D. degree through its Medical Scientist Training Program (MSTP), and has other students enrolled in joint programs in medicine and business, public health, divinity and law. Other combinations are possible if it can be worked out between the two schools.

Shinall, an Atlanta native and Harvard University graduate, will likely integrate the divinity portion of his dual degree into the medical part, not vice-versa. He's just not sure how.

"This dual degree is pretty unusual," Shinall said. "It's very much an alternative path, so I'm trying to figure out how things will work," he said, adding that being in academic medicine and doing ethics and medical humanities-type work is appealing to him at this point.

"The issues you discuss in the divinity program are very important for medicine – compassion, suffering, death, purpose, calling. I think I'll have spent more time thinking about those things and perhaps be better able to relate. The sort of practical pastoral care education you get in the divinity school will be helpful in bedside manner and being present for people in hard times. Part of the ministry and a big part of being a doctor is being with people in the hardest times of their life, so having some insight into both ways of doing it

will be helpful. I just haven't decided if it's going to be the extra two years worth of help," he admits.

Shinall's six-year dual degree program has worked like this: he spent the first two years in medical school, took a first step of his medical boards, then two years ago, in the fall of his third year, he started the divinity program. He will start his third year of medical school in July, and will compress the fourth year of medical school into summer and fall of 2008, and spend spring 2009 in the divinity school. The dual degree program actually takes a year less than it would if he obtained the degrees separately.

"There's not a whole lot of integration between the two. You stop one, and do the other," he said. He's built some self-initiated extra medical work into his divinity school years, by shadowing physicians in the clinic and doing some research.

Shinall said he first learned about the dual degree program from his application packet. "It was the first time I had even considered doing anything with my interest in Christianity," the lifelong United Methodist said. "I talked with my minister at Harvard who said he could tell I had the theological itch. It was the first time I had considered this path."

IT STARTS WITH A KERNEL OF EXCITEMENT

Making dual degrees work for students has been a passion of Bonnie Miller, M.D., associate dean for Undergraduate Medical Education.

"If someone has an interest, we would be willing to work with other programs. There's a lot of flexibility," she said. "We'd never tell anybody 'you can't do that' without looking into it."

Miller said that the dual degree programs benefit both the student and society. "There's clearly a need for leaders in all different areas related to medicine. That's the foundation of our Emphasis program (which gives students the chance to do self-directed research under the supervision of a faculty mentor in the first two years of medical school)," Miller said. "We need leaders, not only just in biomedical research, but in policy and law and ethics and public health. We feel that by giving people specialized knowledge and skills in these other areas, we're positioning them for leadership careers in these very important areas."

The dual degree program is in line with Vanderbilt's mission – creating leaders and scholars in medicine. "We get so excited about good ideas. Really original ideas are wonderful things. To be able to help people grow their ideas is very rewarding for those of us working with them," Miller said.

"These kinds of programs can take that kernel of excitement and really cause it to grow. I wish I had had an opportunity like this when I was in medical school."

A WIDER WORLD VIEW, AND A SOFTER HEART

Jo Ellen Bennett had a heart-wrenching, eye-opening talk with a group of

Children wait while their parents undergo an HIV test at a voluntary counseling and testing day in Zambezia, the second most populated province in Mozambique.



JOELLEN BENNETT

young people recently in Mozambique, Africa. Bennett is one of eight Vanderbilt medical students participating in the Medical Scholars Program, a one-year, in depth research experience provided by VUSM.

She asked the young people, who live in the midst of a severe AIDS epidemic, what they wanted to do in the future. “They stated that they didn’t make plans anymore, they didn’t feel like they had hope,” Bennett said. “That’s how severe the AIDS epidemic is here. In a country of 19 million people, an estimated 500 to 700 people per day are becoming infected with HIV.”

Bennett is participating in a HIV care plan in Mozambique – the Presidents Emergency Plan for AIDS Relief (PEPFAR) program. The program is a five-year, \$1.5 billion multifaceted approach to combating HIV/AIDS around the world. Vanderbilt’s Institute for Global Health, under the direction of Sten Vermund, M.D., Ph.D., was awarded money in 2006 to help with the ambitious scale up of anti-retroviral drug treatment in rural Mozambique.

The Medical Scholars program, directed by Tina Hartert, M.D., M.P.H., is intended to foster an interest in research among medical students that may eventually lead to a career in academic medicine. The students are placed in an appropriate research environment,

given a mentor with a track record of mentoring individuals, and are supported with a \$25,000 stipend.

No prior research experience is required and students have been involved in research programs in clinical research, translational research, basic research, the history of medicine, health services research and medical education research. They participate in the projects both at Vanderbilt and in locations throughout the country and abroad.

Projects of the 60 students who have completed a program include: the role of COX-2 in prostate cancer; the development of a useful database for a medical curriculum; the effect of caregiver conflict



JOELLEN BENNETT

on glucose control in children with diabetes; and a student who worked with Timothy Johnson, M.D., medical reporter for ABC News.

“It’s a very novel program, and as far as I know, we’re the only school in the United States where we institutionally support our students to take a year off during medical school and pay them a stipend. The benefit for most of our students is on multiple levels – personal, intellectual and academic,” Hartert said.

Bennett is a Monitoring and Evaluation Officer on the team and is in charge of developing and implementing the



MY WORLD VIEW IS BROADER, AND MY HEART IS SOFTER TOWARD THOSE WHO SUFFER. LOOKING AT THE FACE OF HUMAN SUFFERING DOES NOT MAKE ME UNCOMFORTABLE, IT MAKES ME FRUSTRATED, AND THAT FRUSTRATION WILL CONTINUE TO MOTIVATE ME TO **GET THE BEST EDUCATION POSSIBLE** UNTIL I CAN GO BACK AND EFFECT CHANGE.”

use of a patient database. When she arrived in 2006, she immersed herself in the Portuguese language and the study of HIV/AIDS care. She routinely travels in between the program’s four sites in rural Zambesia, monitoring the status of activities.

“One simple thing that has touched me is that realization that basic access to a minimum level of health care is a luxury that many people around the world do not get to experience,” Bennett said. “Simple things we often take for granted – nutrition, clean water, safe and secure housing, education, transportation – are glaring and overwhelming needs here.”

Bennett said that while she was visiting a clinic in Alto Molocue, she traveled out with a team to the remote area of Nacauca to do voluntary counseling and testing. She was overwhelmed by the needs of the small community. Many had never or rarely seen a doctor. Diseases that are routinely managed in the United States, like hypertension, diabetes and bladder infections, go unaddressed except by traditional healers. One young man with a wife and small children tested positive for HIV, and was willing to follow up at a clinic, but when he found out the clinic was 37 miles away, said he couldn’t.

“It was eye opening and heart breaking to realize that there are resources to help people like this young man, but for him they are still out of reach,” she said.

The benefit she is getting from her year of study is immeasurable, Bennett said. “I definitely think this experience has helped me grow as a person and I will be a better doctor because of it. I don’t take things for granted. My world view is broader, and my heart is softer toward those who suffer. Looking at the face of

human suffering does not make me uncomfortable, it makes me frustrated, and that frustration will continue to motivate me to get the best education possible until I can go back and effect change.”

A NICE BLEND OF SCIENCE AND MEDICINE

Chris Barbieri is quick to say that fruit-fly genetics aren’t his thing.

But applied medical research is.

“I was one of those guys in college who was kind of on the fence between graduate and medical school,” Barbieri said. “Both of my parents have Ph.D.s in science. I knew I liked science. I just wasn’t sure what I wanted to do with that.”

Then he figured it out: whatever he was going to be researching needed to have an impact on something in the medical field down the road.

He applied to and was accepted in Vanderbilt’s M.D./Ph.D. program, the Medical Scientist Training Program (MSTP), designed to train students who want a primary research component to their careers – those who strive to become faculty members of schools of medicine. Most students pursuing dual degrees at VUSM are in this program.

Graduates of the seven-eight year program will go into either academic or investigative medicine, and will be trained to lead either basic or clinical research teams. Some will go on to become administrative leaders within medical schools, department chairs or deans. Two graduates of Vanderbilt’s program came back to Vanderbilt in leadership roles – Jeff Balsler, M.D., Ph.D., associate vice chancellor for Research, a 1990 graduate, and

Sam Santoro, M.D., Ph.D., chair of the Department of Pathology, a 1979 graduate. “These are the kinds of positions we hope our students aspire to,” said Terry Dermody, M.D., who directs the program. “It’s a long program and a difficult career. The no’s come much more often than the yes’s. Speed bumps are frequent, so not everybody can do it. The career requires commitment, focus, the ability to do something and not be distracted.”

The program accepts 10 students a year. Students complete their first two years of medical school, go into the lab for three to four years, then finish their third and fourth years of medical school. By the end of the first two years, students have had brief rotations in various labs and must have both a mentor and a project approved by a MSTP committee.

Barbieri, who graduated in May, ended up – by his good fortune, he says – in the lab of Jennifer Pietenpol, Ph.D., who is now interim director of the Vanderbilt-Ingram Cancer Center. He has been working with Pietenpol studying the p53 gene, the most commonly mutated gene in cancer. He wanted a lab with graduate school peers around him, students he could learn from and “grow up with.” Pietenpol had one post doc and six graduate students working with her when he joined her lab. “It was an ideal situation for me,” he said.

Barbieri says that Pietenpol expects other people working in her lab to work hard. “She has a lot of energy, she works hard and expects other people working in her lab to give as much effort as she does. It’s a ‘work hard, play hard, have a good time, but get your work done’ kind of environment.”

His wife, Anu Subramony, is also a product of VUSM's dual degree program. She took a year between her third and fourth of medical school and got her master's degree at Vanderbilt's Owen Business School, and is finishing her residency in pediatrics. This summer, she'll begin a job as a pediatric hospitalist in New York City.

Next on his Barbieri's plate – six years of residency at New York Presbyterian Hospital and Weill Cornell Medical Center and a career in urologic oncology.

“When you've been in medical school for eight years, another six years of residency doesn't faze you that much,” he said. “I want to be both a surgeon and a scientist. I feel like I've been trained well in the scientific arena to run a lab someday and I'm definitely interested in taking care of patients as a surgeon, so I want to combine those two things. I've ended up with a lot of advantages coming here.”

SOMETHING WAS MISSING

As Jim Wood looked down his career path, it seemed there were some cracks in the pavement.

He was a biochemistry major at Louisiana State University, because of his pre-med focus, but some of his favorite classes were those in English/literature that he crammed in between the science.

Once at VUSM, the more he thought about the classes, the more he wanted to find a way to blend them into his medical education. Vanderbilt provided him with the dual degree program to do just that.

Wood, who graduated in 2005, took an extra year and obtained a master's degree in English through the Medical



Chris Barbieri, M.D., and his wife, Anu Subramony, M.D.

Scholar's program. “It's a piece of my education I always wanted to have,” he said.

“I wanted my career to straddle the worlds of the university. I didn't want it to become isolated within the medical center in the university, but wanted some involvement some way with the wider university.”

In addition to his work with his master's adviser, Jay Clayton, Ph.D., professor of English at Vanderbilt University, he also worked with Scott Pearson, a fellow of Vanderbilt's Robert Penn Warren Center for the Humanities, to set up a narrative medicine class at Vanderbilt, and served as a teaching assistant.

The narrative medicine course teaches students to write creatively, visiting their imaginations, putting it all on a page for further inspection and introspection, to gain perspective and understanding of themselves and their patients.

His master's thesis, published in the journal *Literature and Medicine* in 2005, was a theoretical approach to the narrative medical write-up (the primary writing assignment that medical students do as part of the narrative medicine class).

Wood, now a second-year resident in

general surgery, said that one of the more difficult parts of participating in a dual degree program is that you miss out on graduating with your class. “There's so much cohesiveness in the classes we have here. You definitely have a sense of wanting to graduate with your class.”

The two fields – medicine and English/literature – are not so far apart, Wood said. “I took a Shakespeare course as a freshman at LSU and the teacher said he thought all medical students should be required to take Shakespeare. To me, the way I thought about education, it made sense to me. It's an important piece, if we're going to be more than pure scientists with a tendency toward becoming technicians.

“Practically speaking, I can't say I know this has made me a better physician,” he said. “But one could argue that being a better reader of literature and having more skills at interpreting stories, would make you a better hearer of patient stories or even a better diagnostician. But I didn't necessarily do it for the practical reasons.” **VM**



A detailed illustration of magnolia flowers and leaves. The flowers are white with yellow centers and pinkish-red stamens. The leaves are green with prominent veins. The background is a light blue wash. The text is centered in the middle of the page.

STEPPING OUTSIDE THE
magnolia
CURTAIN

WRITTEN BY **NANCY HUMPHREY**
ILLUSTRATION BY **GINA TRIPLETT**



Over the past year, nearly every Vanderbilt first- and second-year medical student has left campus, driven to a free east Nashville clinic, and added a component to their education that can't be found within the confines of a teaching hospital.

Stepping boldly outside of Vanderbilt's Magnolia Curtain, Vanderbilt University School of Medicine students not only donate their time to the Shade Tree Family Clinic, they also founded the clinic and supervise its operation.

The clinic, operated by VUSM students in partnership with United Neighborhoods Health Services, is located at the Sam Levy/ McFerrin Park Clinic on Grace Street in Nashville. It is open on Tuesday evenings and Saturday afternoons and provides free care for uninsured and underinsured patients' acute and chronic health needs.

The clinic, supported by VUSM and public and private donations, was a dream of 2007 graduates Katie Cox and Kristina Collins during their second year of medical school. After a year of fund raising and planning, the clinic opened in October 2005.

Sara Horvitz, a third-year student who co-directed the clinic last year with Dana Guyer, also a third-year student, said many of Shade Tree's patients have sporadic or no medical care.

"I saw a woman who hadn't seen a doctor in 20 years. She came pretty much every week, if not twice a week, because she had a lot of medical problems," Horvitz

said. We diagnosed one man with cancer. He was in between jobs and had no health insurance. We got him the care he needed."

All this before she even got to her third year of medical school, the year that traditionally introduces patient care to the students' educational experience.

And although the jump-start to interacting with and treating patients has been beneficial to her education, what she has gained as a person is even more valuable.

"It's the most gratifying thing I've ever done," Horvitz said. "Medical students are very self-centered in the first two years of schooling. We have all this information crammed into our brains for us to spit back out on tests, but we're not really doing anything for anybody else," she said. "It's all delayed gratification. I didn't want to wait to be able to do something for other people. I wanted to start seeing patients in a medical context and feel like I was doing something good for the community."

Shade Tree is one of about 100 student-run clinics across the United States. It's an idea that's catching on. When the clinic was founded, there were only 50.

Robert Miller, M.D., assistant professor of Clinical Medicine and a 1982 graduate of VUSM, serves as the clinic's

volunteer medical director, attending almost every clinic. Miller says that although the medical school's administration has provided tremendous support, he wonders if they might have initially underestimated the abilities and the will of the student founders of the Shade Tree Clinic. Cox, Collins and others received favorable feedback from the administration when they presented their idea, but were asked to bring back some additional data. And they did. A lot of it.

"They did a lot of work around town, finding the zip code with the highest need, and where the highest number of underinsured and uninsured emergency room visits came from," Miller said.

"Our students really wanted to have clinical responsibility earlier and they really wanted to do service, and in areas that are underserved, in ways that they can really contribute," he said. "By working with Shade Tree, they get a real picture of what it's like not to have access to care. They see people coming in with long-standing untreated hypertension, people who have acute illnesses like urinary tract infections, sinusitis or asthma, and if they didn't have a clinic like this, they'd end up in the emergency room, or they wouldn't get treated at all."

More than 440 patients visited the clinic in 750 patient visits from October 2005-October 2006. Of that number, more than 140 returned for a follow-up at least once after their primary visit and 72 patients visited the clinic more than twice during that year.

The clinic works like this: first- and second-year students are paired with third- and fourth-year students in order to obtain vitals, focused histories and physicals. Students present the patient to a volunteer attending physician (of the 80 who volunteer only one is a non-Vanderbilt physician) and the team comes up with a proposed plan, which may include laboratory work or X-rays. With physician approval, the students help implement the plan.

Miller says he believes that Shade Tree receives more support from VUSM than other student-run clinics do from

their institutions. The students and faculty use funds to buy all medications at cost through the Vanderbilt pharmacy. Vanderbilt University Medical Center provides them with free laboratory support and a number of radiology studies each month. "Whatever we've asked for, they've provided," Miller said. "A lot of medical student-run clinics around the country say they don't have anything close to that."

Miller said that besides gaining clinical experience, the students also learn a lot about the health care system. They learn how to practice "without an open checkbook," and are more thoughtful about whether an X-ray or a laboratory test is really needed.

"When you're seeing patients in this setting, you are also taking all the social needs into consideration. If you feel a patient won't take his medicine, you bring him back earlier. If you feel like there is a lot going on at home for a patient, you bring him back earlier. If you feel the patient has been denied certain things like disability or VA benefits or TennCare, you advocate for that. Our students have taken a number of patients and helped get them into the bigger system."

He believes many of the students will become better physicians because of Shade Tree.

"Physicians in the past haven't sometimes supported the underserved or underinsured as well as they should have, and I hope that as a result of helping at Shade Tree, students leaving Vanderbilt will leave with a different attitude in that way," Miller said, remembering a Shade Tree patient who came in with "overwhelming" congestive heart failure and had not been able to get into the VA system. He was evaluated at Shade Tree, and students and faculty helped him navigate and enter the VA system, where he ended up having heart surgery.

"This guy was on death's door and his life has been rescued," Miller said. "He doesn't have a dime to pay. Not everybody is going to leave changed, but



regardless, they will all have had some exposure that they didn't have before."

Shade Tree isn't VUSM's only volunteer opportunity. Students and faculty also volunteer at the Siloam Family Health Clinic, a clinic for uninsured Nashvillians, most of whom are from other countries and many of whom are refugees. They help out at La Clinica de Familia, a free clinic for Hispanic families. Many are involved in activities through the Meharry-Vanderbilt Student Alliance where students have an ongoing relationship with Haynes Middle School in Nashville, supplementing the middle school health curriculum and participating in a group called "Girl Talk," where topics such as self esteem, hygiene and healthy living are discussed.

The school also gives students the day off every Martin Luther King Day, encouraging them to go out into the community on that day to do service work. And the class vice presidents are responsible for organizing community service projects for each class. All the members of a particular class vote on a project, and the class supports that project.

Dan Stover, who will graduate in 2008, served as vice president of his first- and second-year class. The Class of 2008 has supported the Oasis Center, a Nashville youth-centered organization that offers four primary programs: crisis services, transitional living services, counseling and youth leadership development.

Vanderbilt students have worked with the Oasis Center's street outreach program, going out with staff members

Sara Horvitz, bottom row, second from left, with other students and faculty at the Shade Tree Family Clinic.

and reaching out to homeless teenagers, and also participated in a partnership between the center and the Metropolitan Nashville Health Department providing sexually transmitted disease testing in local coffee shops. The VUSM students also established a tutoring program for math and science at the Oasis Center's emergency shelter where they helped establish a tutoring library.

"This is important to me," said Stover, who prior to coming to medical school worked for a non-profit organization setting up volunteer programs. "The Medical School has a great set-up, having someone (the class vice president) dedicated to encouraging community service."

Stover's class has also paid from class dues mentoring dinners with Oasis Center youth, an opportunity to provide positive role modeling.

"I come from a long line of involvement in the community," Stover said. "You don't really understand who you are until you're an integrated member of a community, and there's no better way than working with people that you might not see every day. I think students get as much out of their work at the Oasis Center as the center gets out of us. There's a lot to be gained from working with other people, other cultures, other ideas and backgrounds." **VM**

:: feature

practice

MAKES PERFECT

WRITTEN BY PAUL GOVERN

ILLUSTRATION BY ANDROSOV KONSTANTIN FOR ISTOCK





With patient demand

running continually high, space is at a premium on the Vanderbilt Medical Center campus. It's Grand Central Station but with lots of very sick people, where bed management entails the balletic coordination and hair trigger reflexes of a NASCAR pit crew. Entire clinics are preparing to decamp next year, heading en masse across town to a repurposed shopping mall that's surrounded by acre after acre of parking spaces. But they won't be any less busy after their move.

"Twenty years ago, students could see a patient over a two-week period. Now patients are gone in three days, and they're very busy while they're here, so it's a different environment that students are being forced to learn in. In most clinical experiences, you catch what you can and it's completely random how students learn," said John Shatzer, Ph.D., director of CELA, the Center for Experiential Learning and Assessment.

A building in the heart of the campus, CELA's new 11,000-square-foot facility is a \$6 million test kitchen tucked within a bustling 24-hour mega restaurant. It's about verisimilitude. Students learn how to be doctors here, in an innovative instructional environment designed to give a leg up to students and residents, and to lend new spice to Continuing Medical Education.

The center's sick people are artful simulations, pro re nata employees who are recruited, trained, put in gowns and theatrical makeup and paid \$15 an hour both to portray patients and to critique medical students. The center also wields a range of simulation technologies, including mannequins priced like mid-size condominiums, able on queue to bleed or moan or go into seizure. One floor of the two-story facility in Medical Research Building IV will include 12 clinic exam rooms, and the other will include a flexible space that triples as a six-bed ED, a four-bed ICU, or a couple of operating rooms — all under hidden microphones and pan-tilt-zoom cameras, like in a casino.

"With simulation, we can specify exactly what needs to be accomplished on any given day," Shatzer said.

Simulation as an adjunct to medical instruction was born in the 1960s. CELA was launched last year, its coordinated programs in human simulation and simulation technologies housed temporarily in various quarters around campus. The fledgling center represents a major investment in an area of experiential learning that was formerly a more minor sidelight at VUSM.

Since 2004, licensure for new physicians has involved work with both mechanical simulators and play-acting patients, often called standardized patients.

"People are coming to understand the role of simulation in improving patient safety, and there is beginning to be evidence for a safety benefit," Shatzer said. "These types of programs have really come into their own only in the last five or 10 years. It's my belief that in the next 10 years you'll see requirements for students and residents to participate in simulations of all kinds before they see patients. This way of learning will rapidly become far more integrated into medical education than it is today."

"Our effort is patient safety-based and is meant to align with both the medical school's curriculum and the various safety initiatives that are helping to improve outcomes in the hospital and clinic," said Matt Weinger, M.D., Norman Ty Smith Chair in Patient Safety and Medical Simulation and director of CELA's simulation technologies program. CELA programs already reach all first-, third- and fourth-year VUSM students, all interns, all ER and anesthesiology residents, all beginning nurses, and all nurses at Monroe Carell Jr. Children's Hospital at Vanderbilt.

“So much of what can go wrong in a clinical situation comes down to communication. Knowledge, skills, attitudes, behaviors — a full-scale simulation can bring all these aspects into play.”



ANNE RAYNER

The more real, the better

“We provide a service,” Weinger said. “You tell me what you want to teach — that’s our model.” Successful simulations always begin with the course curriculum and the instructor, he said. He is echoed in this by Lisa Rawn, director of CELA’s program for human simulation, also known as the standardized patient program. “The best simulations are written from the faculty member’s own experience as a clinician,” Rawn said.

In the new facility, CELA will routinely run simulations involving difficult situations with multiple patients, family members, physicians and staff.

“So much of what can go wrong in a clinical situation comes down to communication,” Weinger said. “Knowledge, skills, attitudes, behaviors — a full-scale simulation can bring all these aspects into play.”

Weinger distinguished two types of full-scale simulations — those that follow a preset course, and those that veer off in the direction of a clinician-controller’s extemporaneous adjustments. In any elaborate simulation, realistic touches are held to be worth considerable trouble and expense. “The greater the suspension of disbelief, the better the transfer of training,” Weinger said.

“I don’t want to see more joking than you would see in a real OR,” he tells two anesthesiology residents, Jonathan Newton, M.D., and Scott Henderson, M.D., as they ready for a simulation using a mannequin. “The more you do it like it’s the real world, the better.”

In brief scenarios, Newton and Henderson struggle to keep a mannequin alive in OR and ED settings, where things keep going wrong with the patient, the supplies, even the various support staff.

At the end comes debriefing, “In my



ANNE RAYNER

Top: Bobby Gibbons, Biomedical Engineer I, shows 12-year-old Kyoshoa Wade what’s inside of “SimMan,” a human mannequin simulator.

Bottom: Third-year medical student Jon Kropski examines Jennifer Richmond. Richmond was the first Standardized Patient at the Medical School.

view, the most important part of a simulation,” Weinger said.

Some of Rawn’s growing stable of part-time educators (standardized patients) have medical conditions and chronic illnesses of their own, and in simulations they’re given leeway to supplement their roles with their own histories.

“We desperately shy away from calling them patient actors,” Rawn said. “They become educators, trained to evaluate students and provide feedback. (Five of her 30 employees are actual actors; the first of these was recruited when Rawn overheard her practicing dialogue at the coffee stand in Medical Center North.)

“I’m impressed with how effective the standardized patients are,” said John

Leonard, M.D., professor of Medicine, who teaches physical diagnosis. “They really understand the story. The interactions are very real. They’ve mastered the symptom process.”

“Most students are able to really invest themselves in the role,” said Kim Lomis, M.D., who teaches in the VUSM surgery clerkship. “This can’t substitute for real encounters in the hospital, but those encounters are too haphazard. With simulation, we can ensure exposure to key situations.”

As CELA gains momentum, there are plans to provide more standardized simulations for use in assessing competency. **VM**

Taking anatomy high-tech

Vanderbilt medical students have a name for the anatomy texts shelved beside dissection tables in the anatomy lab.

"They call them greasers," said Art Dalley, Ph.D., professor of Cell and Developmental Biology, gross anatomy course leader and director of the Vanderbilt Anatomical Donation Program. The name says it all, describing what happens to these texts as student after student has occasion to interrupt the hands-on examination of a cadaver, pick up a book and thumb to the desired illustration. Greasers tend never to leave the lab, and everyone studiously avoids bringing in their own books.

It's very doubtful anyone regrets that greasers aren't expected to persist through this year of significant transition at VUSM.

Anatomy instruction, conducted in the same lab space on the first floor of Medical Center North since 1925, will move this fall to a new \$6.4 million facility on the 10th floor, high atop the new multi-story addition to MCN.

In the new lab, large-screen computers will take the place of greasers — flat, waterproof computers that are easy to clean. The lab will have 37-inch touch-screen workstations beside each dissection table, suspended from the ceiling on adjustable arms. The computers are of a type designed for outdoor display.

"No other anatomy lab has anything quite like this," said Dalley, whose own books have served students in many labs. Among his other works, Dalley is co-author of "Clinically Oriented Anatomy," published in eight languages and now the principal anatomy text in nine out of 10 U.S. medical schools.

Dalley's office in Light Hall looks like a set designer's interpretation of the den of some relentless intellectual. Papers, like a turbulent sea, spill over every surface, and walls are lined to the ceiling with books. "Welcome to the chaos," he said, leaving the impression that the room always appears this way.

Beginning in the 2007-2008 school year, the gross anatomy course will be integrated into a 17-week instructional "block" called Structure, Function and Development, combining gross anatomy, histology, embryology and physiology. Total instruction time in gross anatomy for first-year students will drop from 240 hours to 190 hours. (There are plans to include some anatomy in a fourth-year block still under development.) "We'll need to be more efficient in our instruction. We're critically examining every component of our course," Dalley said.

A great new teaching facility should help. At 7,300 square feet, the new lab will be twice the size of the current one. Movable partitions will lend added flexibility.

Compared to seven air exchanges per hour in the current lab, the air circulation in the new lab will provide 22 exchanges per hour. "It should be odor free," Dalley said.



VUSM's new state-of-the-art anatomy lab will open this fall.

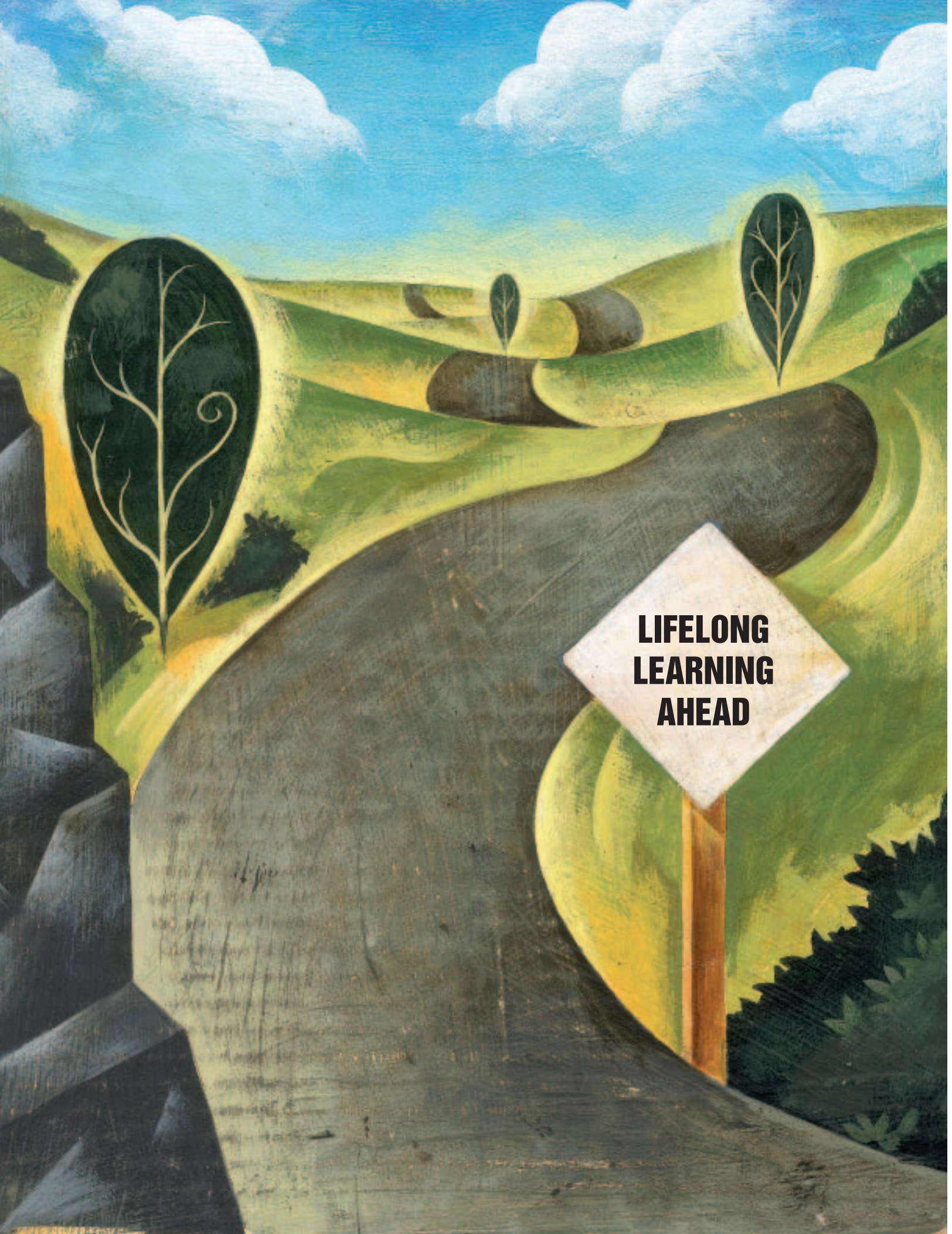
Along with 27 dissection tables, there'll be two demonstration tables, each equipped with cameras and full surgical lighting, and each surrounded by viewing platforms (no more climbing onto chairs). There will also be ample changing rooms for students.

Dalley says there's still no substitute for the experiential learning afforded medical students by work with cadavers. In recent years, two prominent medical schools, Harvard and UCSF, for a time significantly scaled back instruction in gross anatomy, but both schools have since completely reversed themselves.

"You learn how a clock works by taking it apart; it's the same in the lab with the human body. ... Anatomy texts show only the most common variation, but in the lab students come quickly to appreciate the range of normal variation. Physicians eventually train themselves not to even see the norm, but you have to be very well acquainted with it to screen it out."

The current anatomy lab will be redeployed for use by clinical departments as a surgical skills center.

—PAUL GOVERN



**LIFELONG
LEARNING
AHEAD**

Education that keeps going and going

MORE THAN A CENTURY AGO John Shaw Billings, M.D., said, “The education of the doctor which goes on after he has his degree is, after all, the most important part of his education.”

Thus, the idea of lifelong learning in the medical profession is not new. However, Billings, who established the National Library of Medicine, might be surprised to know just how far it has evolved. Almost all academic medical centers have departments of continuing medical education that sponsor hundreds of courses each year. These courses can be as specific as “Bone and Wrist Cadaver” or as broad as “Primary Care Update.”

Vanderbilt Medical School’s Division of Continuing Medical Education is in the business of providing opportunities to help physicians in their continuing professional development. It does so by sponsoring a variety of learning opportunities that range from multiple-day conferences to one-hour experiences that give physicians information they can incorporate into their practices in order to provide the best possible care for patients.

“Last year we provided CME credit to about 300 separate activities, which puts us in the top 20 medical schools across the country in terms of volume,” said Don Moore, director of the Division of Continuing Medical Education and Professor of Medical Education and Administration in the Office of Teaching and Learning in Medicine. “Our job is to ensure that these activities are compliant with accreditation standards and are offered based upon the practice needs of physicians and designed in a way to help them learn.”

Lifelong learning, often referred to as continuing professional development, comprises both formal and informal learning episodes. CME is the formal arm of lifelong learning and consists of the activities that are designed for physicians. The informal arm embraces any number of activities that physicians engage in on an ongoing search for information, such as reading medical journals, attending grand rounds or consulting with colleagues. Each physician develops his or her own strategy to pursue information in an informal way, Moore said.

“We know from research that physicians go through several stages when they confront a problem in practice,” Moore said. “Once they decide it’s important enough, they’ll begin a search for information. Usually it starts with an informal search. At some point they decide it’s something they need to engage in more formally.”

WRITTEN BY **KATHY WHITNEY**
ILLUSTRATION BY **NICHOLAS WILTON**

“We have to make sure that lifelong learning is part of our culture. As soon as students get here, we are promoting learning as an ongoing, everyday lifelong process. Part of being a physician is that you will learn something every day.”

How do physicians learn? Research supports the notion that physicians learn in response to either specific problems or general problems. They are driven by wanting to provide best possible care to their patients, by the need to stay current on ever-changing information and technology, or simply by curiosity.

“When they get a sense that something isn’t right, like an outcome, or they feel there might be something new in a given area, they get a sense of discomfort,” Moore said. “It makes them do something to reduce the discomfort that they feel. Physicians have a general sense of how things should be, so their searching is an effort to understand that better and find out what they need to do to move in that direction.”

All VUSM faculty are expected to participate in CME activities and are instrumental in instilling in medical students the desire to be lifelong learners. Bonnie Miller, M.D., associate dean for Undergraduate Medical Education, said that medical students know lifelong learning is not a choice, but a responsibility. It is a philosophy that the medical school promotes upon their arrival.

“We have to make sure that lifelong learning is part of our culture,” she said. “As soon as students get here, we are promoting learning as an ongoing, everyday lifelong process. Part of being a physician is that you will learn something every day.”

As the medical school embraces curriculum changes next year, it will incorporate a course for first-year students called Foundations of the Medical Profession that will, among other things, encourage students to be self-directed learners and to act on their curiosity.

Once medical students graduate, The Vanderbilt Medical Alumni Association steps in to support the professional development of not only medical school graduates, but house officers, fellows and researchers.

“This is one of our primary missions,” said Alumni Director Ann Price, M.D. “We continually try to reevaluate how we can support our alumni in their professional development.”

The Eskind Alumni Digital Library is a valuable resource for students and residents as they seek Web-based information. The library devised a Web site for alumni to give them free access to large volumes of journal information.

“Of all the benefits that we offer, this is probably the most accessed,” Price said.

The alumni association also works with medical societies to sponsor social events at annual meetings. In 2004 the association restructured its board and recruited representatives from each recognized society. What they have learned from the board is that it can be extremely challenging for physicians to find the time to pursue professional development while dealing with the demands of residency and practice.

“There is more to learn and less time to do it. More alumni are turning to Web-based alternatives, and most lifelong learning is in their specialty,” Price said.

Moore agrees that it is a challenge for those involved in CME to respond to the time constraints that physicians face.

“The number of patients that physicians see is increasing dramatically. There is pressure to be on committees as medicine becomes a more corporate enterprise. Younger physicians want to have a real

life. They want to be around their kids, have a social life and a community life. That puts stress on the time they have for learning activities.”

In the last 10 years, there has been less participation in CME activities away from the work site or home. The likelihood of a physician going to Hilton Head for a conference or a vacation trip to Orlando is not as common as it once was.

“As CME professionals we are trying to see how we can incorporate educational activities into the work flow of the physician,” Moore said. “We must provide evidence-based information to the doctors at the point of care.”

This model is referred to as ‘just in time learning’ as opposed to ‘just in case learning,’ the outdated model based on filling physicians’ heads with as much information as possible just in case they need it.

“We’re beginning to see how to redesign the education system so physicians can understand how to get information just in time by asking the right questions, by developing a process they can use to help them find that information,” Moore said. “On the other side, the information has to be packaged in a way that it responds to those questions. There is work to do on both sides. We must train physicians on how to recognize and pursue a teachable moment, and we must set up the infrastructure so they don’t have to spend hours looking for it.” **VM**

President's Corner

The Canby Robinson Society is stronger than ever with over 2,400 members, over \$18.5 million in total CRS gifts in 2006 and 19 M.D. and 15 M.D./Ph.D. CRS Scholars. Your commitment is definitely making a difference in patient care, education and research at our Medical Center.

Spring is always a busy time for us. We hosted our fourth annual dinner for the prospective CRS scholars during the Medical School's Second Visit Weekend. The following day the prospective scholars shadowed one of our current scholars. These opportunities have proven to help with recruiting these very talented and highly sought after students.

Another successful endeavor has been our regional dinners and we co-hosted one with Medical Alumni Affairs in Baltimore, Md., on April 30.

Match Day was on March 15 and our eight CRS scholars matched at the following residency programs: Haritha Bodduluri, Plastic Surgery, University of Southern California; Kristina Collins,

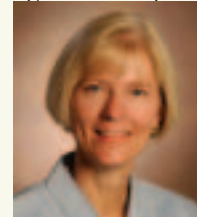
transitional year at UT College of Medicine, Dermatology at Massachusetts General Hospital; Katie Cox, Emergency Medicine, VUMC; Nguyen Ha, transitional year at Arrowhead Regional Medical Center, Ophthalmology, Johns Hopkins-Wilmer, Greater Baltimore Medical Center; Donna Vleugels, preliminary year in Medicine, Barnes-Jewish Hospital, Dermatology, Barnes-Jewish Hospital; Christina Shuman Wise, Psychiatry, University of Kentucky; Edwin Kwon, preliminary year in Surgery at the University of California at San Francisco; and Eric Musiek, preliminary year at VUMC; Neurology at the Hospital of the University of Pennsylvania.

The CRS Board had their spring meeting at the Vanderbilt Kennedy Center for Research on Human Development and board members had an opportunity to tour four programs at the Center. A CRS Outreach Tour was held in early May with Donna Glassford, Director of Cultural Enrichment, leading the tour of the incredible art collection at The Monroe Carell Jr. Children's Hospital at Vanderbilt.

Class Day was May 10 and the CRS

presented a very special annual award which is given annually to the fourth-year student who is voted by his or her classmates as having the intangible qualities of common sense, knowledge, thoughtfulness, personal warmth, gentleness, and confidence that combine to make the "Ideal Physician," the person fellow classmates would most want to have as their personal physician. (see page 46)

Thank you for all you do for Vanderbilt Medical Center and for trusting us to make the best use of your dollars, which in turn allows us to make a significant impact on the lives of so many!



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/

Donor support enhances programs, education

There are many different ways of supporting medical education – directly to students through scholarship or through the programs themselves that enhance the students' education.

Rising second-year medical students Paige Fortinsky (left) and Jared O'Leary (right) with Wallace Rasmussen and his friend, Lan Yun.



Members of the Canby Robinson Society approach giving both ways, some taking an either/or approach and others spreading the wealth through both scholarships and programs. Some prefer giving anonymously. Some don't mind having their name attached to their generosity.

Wallace Rasmussen, former chair and CEO of Beatrice Foods, a major American food processing company, might have spent his business years concentrating on the name brands that made Beatrice Foods a household name – Meadow Gold, LaChoy, Butterball and Swiss Miss – but after retirement his mind turned to helping young people get an education.

His philanthropy is widespread, but his giving to Vanderbilt University Medical Center has included support for

medical school scholarship, the Shade Tree Family Clinic and Vanderbilt-Ingram Cancer Center. He established two medical school scholarships with a gift of \$50,000. The scholarships were recently presented to Paige Fortinsky and Jared O'Leary.

Rasmussen, 92, says that although he has given scholarship money nationally for more than 20 years across the country, he had never gotten a handwritten thank-you note before one came from Megan Herceg, whom he sponsored in VUSM's White Coat Ceremony. The two became good friends and one day she mentioned that the Shade Tree Family Clinic was in need of funding. "I said 'will \$25,000 get you going?'" he recalls.

Rasmussen grew up without much money. He left home when he was 16,

(continued on page 44)

CRS board welcomes new members

The Canby Robinson Society board welcomes six new members to join the existing members who are devoting their time and resources to further the goals of the board.

Eric Chazen, M.D.

Eric Chazen, M.D. has been a lifelong supporter of Vanderbilt University and Nashville. The Tennessee native graduated from Vanderbilt University in 1952 and went to the University of Tennessee Medical School. After graduating in 1956, he came back to Vanderbilt for an internship in Pediatrics and then went to Boston Children's Hospital for his residency. But his heart remained in Nashville.

"I always wanted to practice in an academic medical center, and because I loved Nashville and Vanderbilt I moved back," he said.

During his first year, Chazen ran the pediatric outpatient clinic at Vanderbilt before starting a private pediatric practice in Nashville – a highly successful Green Hills practice he operated for more than 41 years before retiring in 2002. He also acknowledges that he only admitted his patients to Vanderbilt throughout his career.

(continued from page 43)

during the Great Depression, so his parents wouldn't have to feed an extra mouth. At a speech, when he retired in 1980, he vowed to spend the rest of his life helping young people get an education. "I tell them, 'you owe me nothing, not one dime. But I would like you to help somebody, somewhere along the line, because I'm helping you. That's all I ask. That way, we keep the chain going.'"

And there are those who prefer to remain anonymous.

A parent of a VUMS student has given \$250,000 to the Center for Experiential Learning and Assessment, home to both a new standardized patient



TOMMY LAWSON

Left to right, front: Margaret Brennan, M.D., Jim Ayers, Patti Smallwood, Eric Chazen, M.D., Connie Cigarran and Naji Abumrad, M.D.

For 25 years, he taught a childhood development elective course, inviting VUSM students to his office to examine and interview families. He is currently assisting in the medical school's Ecology of Medicine and Physical Diagnosis courses.

The longtime CRS member states that the scholarships offered are its strength. "I would love to see scholarships double or even tripled to entice the finest students to attend Vanderbilt."

Connie Cigarran

Connie Cigarran's involvement with the Canby Robinson Society is just another way in which she gives back to the community.

In addition to her CRS board appointment, Cigarran currently serves as secretary for the Girl Scout Council of Cumberland Valley and is on the board of the Antiques and Garden Show, an event she has been involved with since its

program and a technical-based Center for Medical Simulation. He has also designated money to the student-run Shade Tree Clinic and to scholarships. The decision about giving to Vanderbilt University School of Medicine was an easy one.

"Being the product of a quality liberal arts undergraduate experience and then a large state law school, I came to recognize the huge advantage of learning in an environment where teachers love to teach and the students are hungry for the best possible education. I was pleasantly surprised by what I saw at VUMC," he said. "I saw parallels with my liberal arts undergraduate experience. I saw the passion of the deans and

the faculty for the students, the focus on recruiting and retaining great teachers, and the way the students are encouraged to work together on solving problems. I was also excited about VUMC's commitment to lifelong learning, to collaboration, and to exploring new and better ways to deal with the explosion of information and knowledge, an explosion that would necessitate a change in pedagogy in teaching medical students."

There were many different areas he could have given to, and the choices were many, so he asked.

"The decision to support the Center was in response to our questioning Dean Gabbe about what his top commitment for this campaign was. His belief in the

beginning 17 years ago, when she served as co-chair. She was also co-chair of the first Women of Achievement Dinner benefiting the YWCA.

Cigarran, a certified Montessori teacher, has a Bachelor of Arts degree in French language and literature, and pursued a Master's degree at MTSU in historic preservation.

"Vanderbilt is the outstanding medical center in the region which I and my family, including our grandchildren, use for our health care needs," she said.

"Through my participation on the Canby Robinson Society Board, I hope to make a contribution to its continuing success and to be more involved in the Vanderbilt Medical Center."

Jim Ayers

Jim Ayers has spent his life in the financial world, but he has also allocated part of his time and resources to VUMC.

Ayers, who funds the Ayers Institute at the Vanderbilt-Ingram Cancer Center, has been a member of the Medical Center Board of Trust for two years and was recently asked to serve on the CRS board.

"Vanderbilt is a world-class educational and medical facility – a facility that is not only recognized around the world, but one that is also very enlightened in its relationship with the local community

project is contagious. We hope that our support allows for more efficient learning because there just is so much to learn in such a short period of time."

The parent also became aware of the Shade Tree Family Clinic and of the passion of the students who support it with their time. He sees the East Nashville clinic as an opportunity for students to have a both a strong say in their medical education and a partnership with the Vanderbilt faculty.

"The Medical Center's support for the Shade Tree clinic seems to me a continuation of the creative focus to turn out the best doctors and researchers and to accept their responsibility as leaders in greater Nashville," he said. "The Shade



Canby Robinson Society scholars graduating in May were, left to right: Haritha Bodduluri, Erik Musiek, Katie Cox Johnson, Christina Shuman Wise, Donna Vleugels, Nguyen Ha and Kristina Collins; not pictured, Edwin Kwon.

in Nashville and throughout Tennessee. That combination, more than anything, attracted me to do more work with the institution."

A graduate of the University of Memphis with a degree in accounting, Ayers worked for a pharmaceutical company before taking a job as comptroller for a nursing home, climbing his way to executive management. In the mid 1980s, he bought a small bank in Tennessee, which he has grown from \$14

million in assets to almost \$2 billion with 45 locations.

Patti Smallwood

Patti Smallwood describes herself as a professional volunteer and her record backs up this self-description.

In addition to her work with many community organizations, she has been a member of the Junior League of Nashville for several years, serving as president of the organization in 2004-2005. She was heavily involved with the planning and organization of the Iroquois Steeplechase, an annual event that supports the Monroe Carell Jr. Children's Hospital at Vanderbilt.

When asked to join the CRS board, she graciously accepted the post to carry on the family tradition.

Her father, H. Rodes Hart, is on the VUMC board and has been for several years.

"I am a big fan of the Medical Center and I look forward to serving on the board and helping in any way I can," she said.

Naji N. Abumrad, M.D.

Naji N. Abumrad, M.D., John L. Sawyers Professor of Surgery and chair of

(continued on page 46)

Tree clinic takes full advantage of the opportunity to reach out and make a difference in the community by expanding access to quality medical care, while at the same time providing a rich hands-on teaching environment, one that goes beyond traditional education of diagnosis and treatment, and teaches about real world problems of access and education. It's an opportunity for student activism and student leadership. It's an opportunity for students to learn about issues of practice management and it's an opportunity for faculty to work in ways that they don't usually work. The benefits for the students, the faculty and the community are significant."

- NANCY HUMPHREY

WHERE ARE THEY NOW? ESTHER PENN, M.D.

Esther Penn, M.D., MD'98, enjoys her life in northern California. She and her husband, Daniel Penn, M.D., MD'98, share their 3.5-acre homestead about one hour north of the Golden Gate Bridge with several horses, goats and cats.

After graduating from VUSM, Esther completed a residency at University of Michigan Kellogg Eye Center before accepting a position with Permanente Medical Group.

Permanente is a multi-specialty physician group that contracts with Kaiser Permanente to provide care for patients with Kaiser insurance, accounting for 30 percent to 40 percent of the insurance market in California.

"Working for Permanente Medical Group allows me to work part-time also, so that I can enjoy life outside of medicine and take advantage of this beautiful place we call home," she said.

She is one of six general ophthalmologists who work with retina specialists at the Kaiser Santa Rosa facility, where she primarily cares for elderly patients with glaucoma and cataracts. Her surgical practice is largely cataract

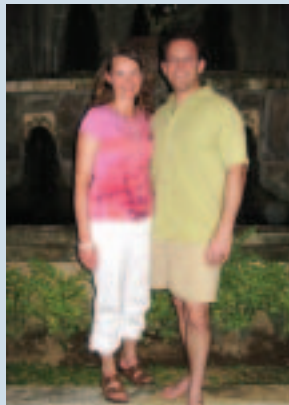
surgery with some eye plastic surgery consisting mostly of blepharoplasties and ptosis repair.

She recognizes and appreciates the gift her Canby Robinson Society scholarship afforded her personally and professionally.

"My CRS scholarship uniquely positioned me to make a specialty choice based on what I most enjoyed, rather than on the financial concerns of paying back the large debt that most medical students accumulate," she said.

- JON COOMER

Esther and Daniel Penn on a recent trip to Bali.



TOMMY LAWSON

Jeff Bontrager (right) with Lonnie S. Burnett, M.D., received the Canby Robinson Society's 2007 "Ideal Physician" award, presented to a member of the graduating class who possesses the intangible qualities of common sense, knowledge, thoughtfulness, personal warmth, gentleness and confidence that combine to make the "ideal physician." Bontrager will serve a residency in Medicine and Pediatrics at the Indiana University School of Medicine.

(continued from page 45)

the Department of Surgery, feels at home at Vanderbilt and recognizes the Canby Robinson Society's role in promoting that feeling for people from all cultures and backgrounds.

"Vanderbilt means a lot to me," he said. "I left after my academic career and figured out that this was the place for me. I came back home."

As a board member, Abumrad wants to enhance the educational opportunities to people from different backgrounds by networking with international students.

"Being a CRS member is a formal way of giving back," said Abumrad, a CRS member for 14 years. "The CRS supports the right causes: student education and diversity."

Margaret Brennan, M.D.

Margaret Brennan, M.D., MD'81, has helped mold countless students in her career and she appreciates the Canby Robinson Society's commitment to help foster the minds of the brightest medical students in the country.

"It is great to have a group dedicated to getting willing funds in the hands of people with active minds," she said. "There are so many people at Vanderbilt with great minds and they need funding."

Brennan, a cardiologist with a private practice in Nashville, was Vanderbilt Chief Resident from 1985-86, the first woman to hold this position. Following this post, she completed her cardiology training at Johns Hopkins University, returning to a faculty position at Vanderbilt for four years before starting her private practice.

In addition to serving on the CRS board, she is the current president of the Brittingham Society, which connects former internal medicine house staff and fellows from Vanderbilt for friendship and professional exchange in an alumni community.

- JON COOMER

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



Vanderbilt Medical Alumni Reunion 2008

The Vanderbilt University School of Medicine has celebrated reunions on a biennial cycle since 1990. Although it may seem as if Reunion 2006 just occurred, we are already planning for Reunion 2008. Reunion 2008 will be held Oct. 23-25, with Vanderbilt playing Duke in the Homecoming football game. The turnout for this past Reunion was excellent, and we hope you will keep Oct. 23-25, 2008, on your calendars as you make your plans for the next year. Hope to see you there.

Special Anniversary Class Celebrants	
Quinq Plus	1957 and earlier
50th	1958/1959
45th	1962/1963
40th	1967/1968
35th	1972/1973
30th	1977/1978
25th	1982/1983
20th	1987/1988
15th	1992/1993
10th	1997/ 1998
5th	2002/2003

Medical Alumni Directory Project

Thank you to everyone who helped us by updating his or her contact information for the directories during this 18-month project. We continue to solicit help with updates. Please send your address updates (especially your e-mail changes) to medalum@vanderbilt.edu.

VMAA and Vanderbilt Alumni Association Co-Sponsor China Adventure

I hope that you have all received the mailings with information concerning the upcoming fall trip to China, Oct. 9-24, co-sponsored by the Vanderbilt Alumni Association and the Vanderbilt Medical Alumni Association. Please take this great travel opportunity into consideration. This trip is a wonderful way to explore China: Highlights of the Middle Kingdom with other Vanderbilt Medical Alumni colleagues. Reservations will continue to be accepted as

along as space is available—but this trip is filling quickly. If you have any questions concerning the China trip please contact Megan Gonzalez at megan.gonzalez@vanderbilt.edu or (615) 322-3026.

Match Day/Mentor Program

This year at the annual Match Day held on March 15, in Room 104 Light Hall, Vanderbilt University School of Medicine students participated in the energetic event which announced where their post-graduate training will take them. The residency matches spanned from San Diego all the way to New York City, with 24 percent remaining here at Vanderbilt University Medical Center. For the fourth year, the Vanderbilt Medical Alumni Association participated at the Match Day by announcing the VMAA Mentoring Program. The mentoring program “matches” VMS IV’s with a medical alumni mentor in the graduate’s new residency city. Matches are city specific rather than program specific. Our medical alumni mentors serve as another valuable resource as our graduates transition to the next stop along their professional paths. If you are interested in participating in this program please contact me at ann.price@vanderbilt.edu.

Submitting Medical Alumni News

Thank you for reading Vanderbilt Medicine, especially the class notes section, which we term “Worthy of Note.” If you have any “news” to share with us, we would love to hear from you. Please submit all news items along with available digital photos [200-300 dpi and at least 4 by 6 inches] to medalum@vanderbilt.edu.

Ann H. Price

CONTACT
Vanderbilt Medical Alumni Association Vanderbilt University Medical Center Phone: (615) 343-6337 Fax: (615) 322-1892 medalum@vanderbilt.edu www.mc.vanderbilt.edu/medschool/alumni

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

* Indicates CRS member

30s

***John M. Salyer, M.D., MD'38,** HS'38, of Indian Wells, Calif., had a series of firsts during his career as an Army surgeon, which included a two-year stint as a surgical consultant for the Far East command during the Korean War from 1952-54. In 1955, as a guest surgeon, he performed the first two direct open-heart surgeries at Walter Reed Army Hospital using the deep hypothermia technique. And in 1956, he performed the first open heart surgery using a pump bypass in an Army hospital, at Fitzsimmons General Hospital in Denver. He performed that same procedure as a first in Orange County, Calif., in 1961, and implanted the first cardiac pacemaker there as well. Salyer was promoted to full colonel in the USA Med. Corps. at age 39, and served as chief of the Department of Surgery at Fitzsimmons for a year prior to Army retirement in August 1959. Another claim to fame, he says, was convincing Gen. Dwight Eisenhower to abstain from cigarette smoking in 1948.

40s

Albert B. Finch, M.D., MD'46, continues to practice medicine (and enjoys it) five days a week in the location from which he's practiced since 1957. He also owns Midessa Motorcycles and sells Iron Horse, Big Dog and Wild West Motorcycles.

***Fred Goldner Jr., M.D., MD'48,** HS'53, CF-'61-'06, joined the emeritus faculty in 2006. He

reports that his daughter, Cynthia Goldner, has been featured in *USA Today* for her art of making clocks from recycled computer parts. His son, Fred, lives in Costa Rica, where he works with the transport of mail and packages to Latin American countries.

James R. Hamilton, M.D., MD'46, retired from the private practice of dermatology in 1995 and from Vanderbilt's Department of Dermatology in 2004. His wife of 60 years, Ruth E. Hamilton, died March 15, 2006.

50s

John M. Clariday, M.D., MD'51, retired in 1985, after living in the same community since 1957. His first patient in 1957 was also his last on the day of his retirement. He is 82, his health is good, and he shot his age three times in 2006 while playing golf. He has four self-employed children.

Eugene Taylor Davidson, M.D., MD'56, FE'59, was co-chairman of the organizational committee of the American Association of Clinical Endocrinologists for the organization's first meeting in 1992, and served as the organization's president during its second year, during which time the American College of Endocrinology was formed. In 1998, he was president of the College. Davidson and the masters of the College were recently honored at the annual meeting of the College and AACE in Seattle.

Fay M. Gaskins, M.D., MD'56, HS'64, FE'68, CF'85-'89, is 81 and in good health. She quit a 50-year smoking habit this year and is pursuing her hobbies of gardening, cooking, piano and meditation. She is retired from Vanderbilt and the VA Hospital in Murfreesboro, Tenn., where she treated Vietnam veterans in individual and group therapy suffering from posttraumatic stress syndrome. She volunteers as a consultant with senior citizens, is a member of his church choir, and assists the lead-

ers of the youth choir. Gaskins has three sons, Abe, Richard and Joe, seven grandchildren and four great-grandchildren.

Murray Heimberg, M.D., Ph.D., MD'59, is now Distinguished Professor of Pharmacology and Medicine, Emeritus, at the University of Tennessee. Although he is retired, he is still enjoying his professional life at age 82, working part-time in the Lipid Clinic seeing patients with metabolic disorders, particularly diabetes and Metabolic Syndrome. He says that although he and his wife, Polly, have more leisure time, they still don't have enough. She spends some of her free time painting and he likes to work in the garden.

James C. Price, M.D., MD'51, retired in November 2004 after 57 years of family practice in Gonzales, Texas. Gonzales Health Care Systems named their rehabilitation and exercise facility "The James C. Price Wellness Center" in his honor.

60s

Bob Alford, M.D., MD'61, HS'66, CF'68-'00, is chief medical officer at Centennial Medical Center in Nashville.

***Kenneth L. Brigham, M.D., MD'66, FA'70-'02,** has been appointed associate vice president at Emory University and director of its Predictive Health Initiative. He has led the initiative since it was established in 2005 as a new model of health care that focuses on health maintenance rather than the treatment of disease. Brigham joined the Emory faculty in 2002 as vice chair for research in the Department of Medicine, director of the Center for Translational Research of the Lung, and associate director for research in the McKelvey Lung Transplant Center.

Gordon Gill, M.D., MD'63, HS'63, retired, joined the emeritus faculty, then returned to "active duty,"

book focus



Dwaine Rieves, M.D., HS/FE'80, has published a book of poems, "When the Eye Forms," a work that evolved from his experience as a public health physician in the county health department in Natchez, Miss., and in the Gay Men's VD Clinic in Washington, D.C.

as Dean for Translational Medicine and director of the College of Integrated Life Sciences at the University of California, San Diego. He is currently vice president of the American Academy of Arts and Sciences, and admits he has failed at retirement. He has seven grandchildren, two of whom were born in December 2006.

***John D. Hutcherson, M.D.,** MD'60, HS'64, lives in Englewood, Colo., is a fellow of the American College of Cardiology, a trustee of Central Methodist University and served on the VUSM alumni board from 1992-1996.

***John Neeld Jr., M.D.,** MD'66, HS'66, received the Ninth Annual John McCoy, M.D., Award from Atlanta's Northside Hospital in March. The award is given to a physician who consistently demonstrates outstanding leadership, dedication and service.

***Warren F. McPherson, M.D.,** HS'66-72, current VMAA Board president, is a senior adviser with Compass Executives LLC, a West Nashville-based management company formed earlier this year. McPherson spent more than 30 years practicing as a neurosurgeon and also served for 11 years as chairman of the board for State Volunteer Mutual Insurance Company.

70s

James T. Ettien, M.D., HS/FE'71-'72, has established Centennial Surgical Associates at Centennial Medical Center in Nashville. Prior to joining Centennial, Ettien spent 27 years at Largo Medical Center where he was chief of the Division of Surgery. He was also physician liaison for the hospital's committee on cancer.

Doug Heimburger, M.D., MD'78, his wife, Beth, and their 16-year-old daughter, Betsy, were on sabbatical in Lusaka, Zambia, from July 2006- January. He was working with University of Alabama,

Birmingham's Centre for Infectious Disease Research in Zambia (CIDRZ) initiating nutrition research in a large population of patients with HIV/AIDS that CIDRZ is treating, along with the Zambian Ministry of Health. The cohort under treatment now totals about 80,000 patients. Heimburger's focus was to initiate nutrition research in the CIDRZ cohort and to examine the effects that the chronic undernutrition has on the outcomes of treatment for HIV/AIDS.

***Everette James Jr., M.D.,** FA'75-'00, reports that the St. James Place Museum, a private folk art museum housed in the restored Robersonville (N.C.) Primitive Baptist Church and featuring pieces from his personal collection, received the Gertrude S. Caraway Award for Historic Presentation, and has been placed on the National Register of Historic Places.

***Col. Stephen L. Jones, M.D.,** MD'78, has been nominated for promotion to the rank of brigadier general in the U.S. Army. He is currently serving as command surgeon in the United States Army Cadet Command in Fort Monroe, Va.

John D. Matthew, M.D., MD'71, was profiled in an article in *Vermont Business Magazine*. Matthew established The Health Center in central Vermont, practices at Central Vermont Medical Center/Dartmouth Hitchcock Alliance, and teaches at Dartmouth College of Medicine and the University of Vermont College of Medicine.

T.D. McKinney, M.D., MD'73, has retired from an academic career and is living on a mountaintop in Deep Gap, N.C. His son, **Jared McKinney, M.D.,** is a faculty member in the Department of Emergency Medicine at Vanderbilt.

***Albert W. Morriss III, M.D.,** MD'72, has retired from clinical

worthy of note

Using virtual reality technology, physicians can now practice risky catheter-based procedures, such as carotid stenting, on a virtual patient simulator, using the patient's exact anatomical data – and then perform the exact same technique on the live patient once the procedure has been mastered.

This procedure was done by **Christopher Cates, M.D.,** HS-'82-'85, director of Vascular Intervention at Emory Hospitals, and was highlighted in the Jan. 17 issue of the *Journal of the American Medical Association*. This "mission rehearsal" is the same idea that the aviation industry and military use in preparing for military missions or practicing landings in flight simulators, but this represents the first use of this concept in medicine.

The first procedure involved a patient with severe chronic obstructive pulmonary disease, who underwent a virtual reality mission rehearsal of the carotid stenting on a simulator, immediately followed by the operator performing the actual procedure on the live patient. Magnetic resonance angiogram images of the patient's aortic arch vessels and cerebral anatomy were converted into a standard Digital Imaging and Communications (DICOM) in Medicine format, loaded on the simulator, and used to recreate the patient's vascular anatomy in virtual reality.

"Although this concept is used by the military and in aviation, this case represents the first implementation in medical practice," he said. "We have performed what we believe to be the first mission rehearsal carotid stenting case using a specific patient's digital vascular anatomy in man, which has vast implications for the future of procedural medicine and the ways procedures are done."



***James B.D. Mark, M.D.,** MD'53, enjoyed his time at Reunion 2006. Catching up on old times are (left to right): Mark, Joyce Randolph, Jean (Maxie) Mark, Judson G. Randolph, M.D.'53, HS'54-'55, and Jan and Harry Jacobson, M.D.



Jim Creely III, M.D., MD'90, (second from left, standing), is enjoying life in Louisville, Ky., with his wife, Ellen, and four daughters: Claire, 14; Maggie, 13; Rachel, 11; and Angela, 7. He is a partner with Louisville ENT Associates and has been spending his free time traveling around the world. In 2004, he climbed Mt. Kilimanjaro in Tanzania, and in 2006, tried heli-skiing in British Columbia and climbing Mt. Rainier in Washington State. He would love to hear from lost friends. jimcreely@aol.com.



Tom McClure, M.D., MD'88, has joined Nashville Orthopaedic Specialists, a practice affiliated with Centennial Medical Center in Nashville. McClure focuses on adult reconstructive surgery and joint preservation of the hips, knees, feet and ankles.

practice. His oldest son, Whit, is marrying Vanderbilt nursing student Blaire Barnes in August.

Betsy Jennings Powell, M.D., MD'76, is living in Fort Walton Beach, Fla. She is no longer in an active medical practice, and is instead pursuing a different path of healing. She was ordained into the priesthood in May 2006. She is married to the Rev. David B. Powell, and participated in a medical mission trip to a village in the Guatemalan highlands last January.

Noreen Rossi, M.D., HS'78-'81, is Assistant Dean for Clinical Research at Wayne State University, where she has been on the faculty since 1985. She has also been program director for the Nephrology Fellowship. Her

research focuses on the effect of exercise on neural regulation of renal sodium excretion.

James Schumacher, M.D., HS'77-'79, FE'92, is a neuroradiologist for the Center for Diagnostic Imaging (CDI) in the Puget Sound, Wash., community coming from the Department of Medical Imaging at Saint Thomas Hospital in Nashville where he served as medical director and chief of radiology for four years. Schumacher has worked as an instructor for vertebroplasty for Stryker Medical Corporation, an innovator of this pain management procedure.

80s

Samuel DeMent, M.D., MD'82, CF'90, of Lexington, S.C., has

been promoted to clinical associate professor of Pathology at the Medical College of Georgia.

Margaret (Peggy) France, M.D., MD'81, worked for 12 years as an attending neonatologist/assistant professor of Pediatrics at Georgetown University in Washington, D.C., and following that, as an attending neonatologist at Alexandria Hospital in Northern Virginia. For two years, France and her husband, Roger Hart, a veterinarian, have lived in a log house in the woods backing up to a large park on the Occoquan River. France's twins, Katie and Abby, will be 26 in December.

***George Holcomb III, M.D., MD'80, HS'80-'86, FA'88-'98,** presented the 14th Loren R. Chandler Memorial Lecture at Stanford University School of Medicine in January. His topic was "Current Thoughts about Laparoscopic Fundoplication in Infants and Children." He is surgeon-in-chief at Children's Mercy Hospital and the Katherine B. Richardson Professor of Surgery at the University of Missouri at Kansas City School of Medicine. In addition, he is director of the Pediatric Surgery Residency Training Program at Children's Mercy.

Joel Koenig, M.D., MD'82, reports that after 17 years as chief of Pediatrics at the Missouri Baptist Medical Center, he is associate professor of Clinical Pediatrics at Washington University and practices pediatrics at Town and Country Pediatrics in St. Louis. His book, "Cherokee Chronicles" sold out, but copies are still available through Amazon.com.

Peter Marshall, M.D., MD'83, says his Vanderbilt medical education prepared him for a varied medical career – five years of rural family practice in Wisconsin, then eight years of urban family practice and urgent care in St. Paul, Minn., followed by seven years in occupational medicine on the faculty of the University of

Minnesota occupational medicine residency. Now he's entered a new phase – a medical disability evaluator for compensation and pensions at the Minneapolis VA Medical Center. Marshall, who says retirement might be next, still plays the fiddle, and is looking forward to a trip to Morocco with his 17-year-old daughter, Madeline, and helping her with her college search.

Theodore Miller, M.D., MD'87, was awarded the President's Medal of the International Skeletal Society at its annual meeting in September 2006. It is awarded for significant achievement in and contributions to the field of musculoskeletal imaging by someone who has not yet passed their 45th birthday. After working at North Shore-Long Island Jewish Health System as chief of Musculoskeletal Radiology, he began a new job last year, as an attending radiologist at the Hospital for Special Surgery in New York City. He was also inducted as a fellow of the American College of Radiology at its annual meeting in Washington, D.C.

***J.D. Rosdeutscher, M.D., MD'87**, was voted No. 1 for "Best Nip and Tuck," and his wife, **Kim Rosdeutscher, M.D., MD'88**, was voted No. 3 for "Best Pediatrician" in the *Nashville Scene's* annual "best of" survey.

Robert Sahl, M.D., MD'82, is living in Avon, Ct., with his wife of 16 years, Beckie, and their three children, Cassie, Jessa and Sam. After psychiatric training at Western Psychiatric Institute and Clinic in Pittsburgh, he remained on the Child and Adolescent Psychiatry faculty for 11 years, before moving to Connecticut. He is currently the division chief of the Child and Adolescent Psychiatry group at the Institute of Living in Hartford, Ct.

Eric Senn, M.D., MD'88, is vice chief of staff at Grand Strand Regional Medical Center and will

become chief in 2008. He is on the board of directors of his corporation, Carolina Health Specialists, as well as the Carolina Center for Medical Excellence. He and his wife, Angelica, have a very talkative 3-year-old son, Aleksander. Senn is joined at Grand Strand by three other class members, Jarratt and Janet Lark and Derek Horstemeyer.

Valerie A. Short, M.D., MD'85, is with a practice group in Laurel, Miss., that is currently under South Central Regional Medical Center's ownership. She has a 14-year-old daughter, who is completing the eighth grade and plays on the Laurel-Jones County under-15 girls select (competitive) soccer team. Mother and daughter recently returned from a competitive soccer trip to England.

David Sweatt, Ph.D., Ph.D.'86 has been appointed associate director of the Center for Aging at University of Alabama, Birmingham, and director of the center's Neuroscience and Aging Research Program. He will work closely with the Center for Aging leadership to enhance programs involving the more than 175 faculty members affiliated with the center. He joined UAB as Department of Neurobiology chair in February 2006. An internationally-recognized expert on biological mechanisms underlying learning and memory, he holds the Evelyn F.



Nels Gunnarsen, M.D., MD'90, (above) who retired from the U.S. Air Force as a Lt. Colonel last year, has joined North State Radiology in Chico, Calif.

McKnight Endowed Chair for Learning and Memory. From 1989 to 2005, he was professor of neuroscience and director of the neuroscience graduate program at Baylor College of Medicine, Houston.

Curtis Tribble, M.D., MD'80, has been named vice chair of the Department of Surgery and chief of its Division of Cardiothoracic Surgery at the University of Florida College of Medicine. He will oversee the entire Department of Surgery and train medical students practicing cardiothoracic surgery. In 1991, he helped perform the first lung transplant in Virginia, while on

the faculty at the University of Virginia.

Terri Vrtiska, M.D., MD'87, was recently recognized by her peers with the 2006 Mayo Clinic Diagnostic Radiology Carmen Award for Clinical Excellence. The annual award recognizes excellence in clinical radiological care. Since completing her residency in 1994 at the Mayo Clinic in Rochester, Minn., she has been a member of the Mayo Clinic medical staff, becoming assistant professor in 2004. She is physician director of the clinical 3D and post-processing lab and recently collaborated with a large medical team including 18 surgical col-



worthy of note

Gregory S. Henderson, M.D., Ph.D., Ph.D.'92, MD'93, (right) was awarded the College of American Pathologist's first-ever distinguished patient care award at the association's annual meeting in San Diego in September. He was recognized for his outstanding dedication to patient care in the aftermath of Hurricane Katrina. He was the sole physician at the New Orleans Convention Center, which housed more than 20,000 people after the storm. He is currently the associate chairman of the Ochsner Health System Department of Pathology and Laboratory Medicine in New Orleans, as well as head of anatomic pathology at that facility. He is also a member of the Medical Executive Committee at the Ochsner Clinic Foundation. "Dr. Henderson's commitment to the people of New Orleans during and following the storm was exemplary. In addition, he continues to work tirelessly to deliver quality health care as the city rebuilds," said CAP President Thomas M. Sodeman (shown here presenting the award to Henderson).



Chris Ambrose, M.D., MD'02, is associate director of MedImmune, Inc., a biotechnology company in Gaithersburg, Md. He and his wife, **Rose Ambrose, M.D., MD'02**, in private practice as a psychiatrist in Columbia, Md., have two children (shown above), **Sally, 2 ?** and **Charlie, 3 months**.

leagues in the separation of conjoined twins. Her primary research and clinical activities are directed toward imaging of the kidneys and blood vessels as well as advances in CT technology.

***John Wadlington, M.D., MD'88**, welcomed his first child this year, a daughter, Anna Louise, born Jan. 25.

90s

Jeffrey F. Bleakley, M.D., MD'93, is an interventional cardiologist at the New England Heart Institute of Catholic Medical Center in Manchester, N.H.

Judd Brandeis, M.D., MD'95, is a partner in Pacific Urology in Walnut Creek, Calif. He and his

wife, Anjali, a dentist, have three daughters – Sydney, Sabrina and Olivia – and a son, Owen.

Jasminka Vukanovic-Criley, M.D., MD'95, HS'95-'98, has been promoted to Adjunct Clinical Professor of Medicine at Stanford. She is helping organize the 30th annual Society of General Internal Medicine meeting on Cardiac Exam, this year, in Toronto, which will focus on "Virtual Patient Examinations: Improving Cardiac Skills Teaching for Clerkships and Residency Programs."

Alexander Fan, M.D., MD'96, received the Golden Apple Award for Excellence in Teaching from the Cedars-Sinai Medical Center Department of Psychiatry.

Evander Fogle, M.D., MD'98, is an instructor of orthopaedic trauma at the Naval Trauma Training Center, where training takes place for military personnel who are preparing to deploy overseas. In August, he will be returning to civilian practice at Resurgens Orthopaedics in Atlanta. He and his wife, Robin, have welcomed their second son and are looking forward to moving to Atlanta where Robin will join a reproductive endocrinology/infertility practice at Atlanta Center for Reproductive Medicine. He is looking forward to the Class of 1998 reunion in October.

John Hill, M.D., HS'97-00, and his wife, Stacy, welcomed a son, Brock Alexander, on Sept. 3, 2006. He joined big sister, Madelyn, 3. He is practicing with Henderson Hematology and Oncology in Hendersonville, N.C.

Mei Chris Huang, Ph.D., Ph.D.'92, has joined the faculty of Southern Illinois School of Medicine as assistant professor of Internal Medicine, specializing in gastroenterology. She is board certified in internal medicine and gastroenterology. Her research interests include colorectal cancer. She is married to William Yu, Ph.D., associate professor of Computer Science at Southern Illinois University Edwardsville. They have two children.

James N. Johnson, M.D., MD'93, has been a team physician for the USA Swimming National Team since 2001. He is a sports medicine specialist at Nashville Orthopaedic Specialists, PC in Nashville. He and his wife, Catherine, are expecting their second child in August. Their son, James, will be 2 in December.

Esther Maksymovich Penn, M.D., MD'98, and **Daniel Penn, M.D., MD'98**, sadly report that they lost their newborn daughter, Maya Lauren Penn, when she was still-born at 38 weeks gestation on Dec. 17, 2006.

Michael "Adam" Kremer, M.D., MD'97, HS'97-'98, is currently practicing neurosurgery in Joplin, Mo. His third child, Amelia, was born in December 2005.

Randall M. Minor, M.D., MD'91, moved home to Paris, Tenn., in 1998 where he is an emergency medicine physician at Henry County Medical Center and his wife, Christy, is a pediatrician. They have three children: Garrett, 12; Andrew, 9; and Anna, 4.

Brian Mullaney, M.D., MD'93, Ph.D.'92, has moved to Indianapolis as director of the oncology pharmacogenomics group working on targeted drugs for Phase 2-3 trials at Eli Lilly.

Susan Pearce Pikal, M.D., MD'97, married Robert Pikal, M.D., in August 2004. She is an internist at North Woodward Internal Medicine Associates and is on staff at Beaumont Hospital in Royal Oak, Mich.

Leopoldo Rodriguez, M.D., HS'96-'00, has been promoted to chief of the Department of Anesthesiology at Aventura Hospital and Medical Center in Aventura, Fla.

***Robert Rosenfeld, M.D., MD'94, HS'94-'98**, is currently practicing obstetrics and gynecology at Skagit Valley Medical Center in Mount Vernon, Wash. His duties include supervising nurse midwives and working with family practice physicians who do deliveries. He is department head at the medical center and chief of staff at the hospital. He and his wife, Becky, live in a 100-year-old home on a small lake in Northwest Washington, close to hiking, skiing, fishing and kayaking, the Puget Sound, the Strait of Juan de Fuca and the San Juan Islands. Their son, Brad, is graduating this year from the University of Denver.

***Tyler Staelin, M.D., MD'96**, recently joined Tennessee Orthopaedics Alliance in

Nashville, specializing in hand surgery. He and his wife, Katie, have added two children in as many years, Fielding and Tess.

Stephen F. Stanziale, M.D., MD'97, joined Anne Arundel Medical Center in Annapolis, Md., in 2006. He and his wife, Amy, will welcome their second child in May, joining brother Lucca, who will be 2 in June.

Peter Swarr, M.D., HS'99-'01, married Elizabeth Calhoun on April 8 in Cheraw, S.C., He is a partner with Cool Springs Internal Medicine and Pediatrics and is on the faculty at Vanderbilt. She is a senior consultant with Vanderbilt Center for Better Health.

Dennis Szurkus Jr., M.D., MD'98, was elected to the executive committee of the Medical Staff at the U.S. Naval Hospital in Pensacola. He was a gynecologist in Kuwait as part of the U.S. Naval Service coalition forces as part of Operation Iraqi Freedom March-September 2006. He and his wife, Kristina, who is completing a two-year term as a law clerk for the 11th Circuit Federal Court of Appeals, are expecting their first child in June.

Tom Talbot, M.D., MD'96, FE'03, FA-03- , and **Helen Keipp Bredenburg Talbot, M.D.,** HS'99-'03, FE'06, FA'06- , welcomed their second child, a daughter, Anna Kathleen, on Nov. 16, 2006.

Elizabeth Tyler-Kabara, M.D., Ph.D., MD/Ph.D.'97, assistant professor of Neurological Surgery and Bioengineering at the University of Pittsburgh, welcomed a daughter, Isabelle Christine Kabara, in November, 2005. She also directs the Neural Enhancement Laboratory in the Department of Neurological Surgery. Current research projects in this laboratory include stem cell therapies in the treatment of both adult and pediatric traumatic brain injury.

Karen Wasilewski-Masker, M.D., MD'99, HS'99-'02, married Kenneth Masker, vice-president of Marketing for Assurgent Medical Solutions on Dec. 2, 2006, in Atlanta. She recently completed training in pediatric hematology oncology at Emory University and has joined the faculty there.

Kathleen Crews Williams, M.D., MD'93, is an endocrine surgeon in Nashville specializing in thyroid and parathyroid surgery. She and her husband, **Brad Williams, M.D.,** HS'81, have two sons, Matthew, 4, and Nathan, 2.

2000-

Lynn Bunch, M.D., MD'02, is completing the Integrated Fellowship in Geriatrics and Palliative Care at Mount Sinai School of Medicine in New York City. In July she will join the faculty of the Department of Geriatrics at Mount Sinai as assistant professor, focusing primarily on inpatient palliative care and medical student education in the areas of palliative care and geriatrics.

Lauren Peters Fulkerson, M.D., MD'03, completed residency training in Pediatrics at UCLA in June 2006 and joined a multi-specialty private practice in Palos Verdes, Calif., in August 2006. She is currently practicing general pediatrics and is working with another general pediatrician, a pediatrics allergist/immunologist and a pediatric neurologist. She and her husband, Mike, welcomed twin boys, Jack and Luke, on March 13. They are living in Manhattan Beach, Calif. Mike, a 2001 graduate of Vanderbilt's Owen Graduate School of Management, is working for Activision, Inc., as director of marketing.

Laura K. Green, M.D., MD'02, will complete a fellowship in Cornea, Refractive and Anterior Segment Surgery at the Wilmer Eye Institute at Johns Hopkins in June. She finished an ophthalmology residency at



Brian R. Lindman, M.D., MD'03, is finishing his first year of fellowship at Washington University in St. Louis. He and his wife, Jenny Lark, have a 16-month-old daughter, Manna Caroline (above).



Christopher Keefer, M.D., MD'01, and **Stephanie McAbee, M.D.,** MD'01, welcomed twins, **Elsbeth McAbee Keefer** (left) and **Henry McAbee Keefer**, on Nov. 29, 2006. McAbee is completing a fellowship in gastroenterology at Vanderbilt this year, while Keefer finishes a pediatric infectious diseases fellowship. He is currently studying respiratory syncytial virus (RSV) in the lab of James Crowe, M.D.



James (Matt) Luther, M.D., MD'01, HS'01, FE'07, CF'05-'07, and his wife, Anna, welcomed a son, Andrew Hardin Luther (left) on Dec. 15, 2006. He joins big brother, Marshall, 4. Luther is currently a nephrology fellow at Vanderbilt.



Alumni attending the St. Louis Vandy Medical Alumni reunion report that it was a huge hit. About a dozen people showed up to meet and reunite with old friends. From left to right are: Brad Kovach, '02, David Smith, '02, Michael Fallucco, '05, Elise Fallucco, '04, Manish Shah, '06, Allison and Will Newman, '06, Travis Henry, '05, his wife, Erin [who received her Ph.D. from Vanderbilt], Rehka Mody, '06, and David Strayhorn, '04.

dance. The couple is living in the mountains of Evergreen, west of Denver.

Nicole Streiff McCain, M.D., MD'03, HS'03-'07, is completing her chief resident year at Vanderbilt, and will stay on as an assistant professor of Emergency Medicine. She and her husband, Patrick, welcomed a baby girl, Catherine Ann, on St. Patrick's Day, 2007. She weighed 7 pounds, 4 ounces, and was 20 1/2 inches long. The family lives in Franklin, Tenn.

Allan Frederick Moore, M.D., MD'03, married Rebekah Elizabeth Gee, M.D., daughter of Vanderbilt Chancellor Gordon Gee, on Oct. 7, 2006. They were married in Nashville. Moore completed an internal medicine residency at Massachusetts General Hospital in Boston, where the couple met as medical residents, and is currently a fellow in endocrinology at Massachusetts General. He is also enrolled in the Scholars in Clinical Science Master's Program at Harvard Medical School. Gee, an obstetrician and gynecologist, is a Robert Wood Johnson clinical scholar at the University of Pennsylvania, studying health policy at the university and working for increased access to contraception and improved health care for women.

Kimberly Vinson, M.D., MD'03, will return to Vanderbilt as an Otolaryngology Head and Neck fellow in July 2008.

Christopher Williams, M.D., Ph.D., Ph.D.'00, MD'02, HS'02, will be joining the Vanderbilt faculty as an assistant professor of Medicine and Cancer Biology in July.

Massachusetts Eye and Ear at Harvard in June 2006. She will be joining the full-time faculty at the Kreiger Eye Institute at the Sinai Hospital of Baltimore in August. She and her husband, Basil Rousos, welcomed their first child, Anna, in June 2005.

Igen Hongo, M.D., HS/FE/04-'06, is an infectious diseases attending at Musashino Red Cross Hospital in Tokyo.

Bridget Mikysa Lauro, M.D., MD'01, is finishing her radiology residency at the University of Washington in Seattle in June and is doing a six-month fellowship in musculoskeletal imaging at the University of Colorado. She will begin a new job with Rocky Mountain Radiology in West Denver this year. In August of 2006 she married Joe Lauro in Whistler, B.C., with classmates and fellow VUSM alumni in atten-

Jared Antevil, M.D., resident in Thoracic Surgery, was recently chosen by Vanderbilt University School of Medicine students to receive the CANDLE (Caring, Advocating, Nurturing, Determination, Leadership and Empathy) Award. The honor is given to individuals who have devoted themselves to teaching and mentoring. Recipients are nominated and chosen based upon their positive impact on the lives of physicians-in-training, and are recognized by their students as examples of excellence in medical education.

***Judy Aschner, M.D.**, professor of Pediatrics and director of the Division of Neonatology, and ***Terence Dermody, M.D.**, professor of Pediatrics and Microbiology and Immunology, were recently elected to the American Pediatric Society (APS), one of the nation's oldest and most prestigious academic societies. They were inducted at the society's annual meeting in May.

***Joey Barnett, Ph.D.**, has been appointed to the board of directors for the American Heart Association's new Greater Southeast Affiliate, where he will serve as the vice-chair on the Research Committee. Barnett has been affiliated with the AHA for nearly 20 years, serving as president of the Nashville board of directors and also as a fellow and an established investigator for the AHA.

Rick Barr, M.D., has been named chief of the Division of Pediatric Critical Care at the Monroe Carell Jr. Children's Hospital at Vanderbilt. Barr, associate professor of Pediatrics and Anesthesiology, joined Vanderbilt in 1995 and also serves as co-director of Pediatric Critical Care services, a role that he shares with **Neal Patel, M.D.**

***Jordan Bertin, M.D.**, has been named medical director of the Vanderbilt-Ingram Cancer Center's Clinical Trials Shared Resource (CTSR). In this role, Bertin has oversight and decision-making authority for the Cancer Center's clinical trials efforts; he also oversees the work of the Scientific Review, Resource Allocation and the Data Safety and Monitoring committees.

***Nancy Brown, M.D.**, professor of Pharmacology, and ***Kevin Johnson, M.D.**, associate professor and vice chair of the Department of Biomedical Informatics, have been appointed to the Advisory Council of the National Center for Research Resources at the National Institutes of Health (NIH) for four-year terms. The 18-member council advises the center about its program of support, which includes the nation's General



***Jeff Conn, Ph.D.**, who directs the Pharmacology Department's Program in Translational Neuropharmacology and the Vanderbilt Institute of Chemical Biology's Program in Drug Discovery, has achieved the scientific equivalent of a grand slam. He is the first person to receive two major awards in the same year from the American Society for Pharmacology and Experimental Therapeutics (ASPET), one of the oldest and most prestigious science organizations: The 2007 Pharmacia-ASPET Award for Experimental Therapeutics; and an ASPET-Astellas Award in Translational Pharmacology.

Clinical Research Centers (GCRCs) and other resources for biomedical research.

Vivien Casagrande, Ph.D., has been elected as a fellow of the American Association for the Advancement of Science (AAAS), an honor bestowed upon AAAS members by their peers. Casagrande was honored by the association for her "distinguished contributions to our understanding of the cellular patterns and connections of the mammalian visual system, including its embryological and early postnatal development."

***Kevin Churchwell, M.D.**, has been named the interim chief executive officer of the Monroe Carell Jr. Children's Hospital at Vanderbilt. He succeeds ***Jim Shmerling**, who has accepted a position as president and chief executive officer of The Children's Hospital of Denver. Churchwell is currently chief of staff/associate medical director for Children's Hospital, a post he has held since 2005.

***Ellen Wright Clayton, M.D., J.D.**, the Rosalind E. Franklin Professor of Genetics and Health Policy, professor of Pediatrics and Law and co-director of Vanderbilt's

Center for Biomedical Ethics and Society, ***Randolph (Randy) Miller, M.D.**, the Donald A.B. and Mary M. Lindberg Professor of Biomedical Informatics, professor of Medicine and Nursing, and from 1994 to 2004, the founding chair of the Department of Biomedical Informatics, and professor emeritus of Medicine ***Alastair J.J. Wood, M.B., Ch.B.**, have been elected to the prestigious Institute of Medicine (IOM) of the National Academies. Comprised of top health experts and life scientists, the IOM serves as an adviser to the nation to improve health. Clayton, Miller and Wood join some 1,584 IOM members, including 13 other Vanderbilt faculty members. Members are elected by a vote of current members.

***Jayant Deshpande, M.D.**, professor of Anesthesiology and Pediatrics and vice chair of Pediatric Anesthesiology, has been named anesthesiologist-in-chief at the Monroe Carell Jr. Children's Hospital at Vanderbilt. In the new role, Deshpande will work as part of the perioperative leadership team to ensure delivery of high quality, efficient care to patients.



***Peter Martin, M.D.**, professor of Psychiatry and Pharmacology, (left) has authored a new book, "Healing Addiction: an Integrated Pharmacopsychosocial Approach to Treatment," published by John Wiley and Sons. The book is intended for the layman as well as non-psychiatrist physicians and psychotherapists.

begins July 1. The study section reviews applications for grants to study the cell and molecular biology of gastrointestinal and liver function.

***Paul Hain, M.D.**, assistant professor of Pediatrics, director of the Pediatric Hospitalist Program and the medical director of the observation, overflow and seventh floor inpatient units, and ***Margaret "Meg" Rush, M.D.**, assistant professor of Pediatrics, program director for Fellowship in Neonatal-Perinatal Medicine, associate director of Pediatric Transport, medical director of Neonatal Transport and co-chair of VUMC's Ethics Committee, have been named interim associate chiefs of staff at the Monroe Carell Jr. Children's Hospital at Vanderbilt. The role of chief-of-staff was previously held by **Kevin Churchwell, M.D.**, who is now serving as interim chief executive officer of Children's Hospital.

Steve Hyman, M.D., has been named medical director of Medical Center East operating rooms at Vanderbilt University Medical Center. An associate professor of Clinical Anesthesiology at Vanderbilt University School of Medicine, he has been affiliated with Vanderbilt since 1979. His previous appointments at VUMC include more than four years as the associate medical director of the Neurological Care Unit.

Pierre Massion, M.D., has been awarded \$450,000 from The ASCO Foundation of the American Society of Clinical Oncology (ASCO) to continue his lung cancer research. Massion, assistant professor of Medicine and Cancer Biology at the Vanderbilt-Ingram Cancer Center, was awarded the 2007 Advanced Clinical Research Award (ACRA) in recognition of his commitment to advancing progress against lung cancer and improving the treatment of people living with the disease. His research project will evaluate a new approach to the early detection of lung cancer.

***John Penn, Ph.D.**, has been named the first recipient of the Phyllis G. and William B. Snyder, M.D., Chair in Ophthalmology and Visual Sciences at Vanderbilt. The appointment will allow Penn, professor and vice chair of Ophthalmology and director of research for the Vanderbilt Eye Institute, to further grow his research program in retinal angiogenesis.

***Brent Polk, M.D.**, director of the Division of Pediatric Gastroenterology and the Vanderbilt Digestive Diseases Research Center, has been named interim chair of the



DEAN DIXON

***Pat Levitt, Ph.D.**, (above) director of the Vanderbilt Kennedy Center, and research fellow **Daniel Campbell, Ph.D.**, who recently published groundbreaking research on genetics and autism in the Proceedings of the National Academy of Sciences (PNAS) are receiving the Cozzarelli Prize, an annual award that recognizes PNAS papers of outstanding scientific excellence and originality. PNAS established the award in 2005 to honor late Editor-in-Chief Nick Cozzarelli, whose lab motto was "Blast ahead." Cozzarelli was known for encouraging researchers to push the envelope of discovery. The VKC article, "A genetic variant that disrupts MET transcription is associated with autism," is "an excellent example of these same qualities," according to PNAS Editor-in-Chief Randy Schekman, and was one of six PNAS papers selected from a group of 3,300 to receive this year's award. Levitt now holds the Annette Schaffer Eskind Chair, endowed by longtime VUMC supporter Annette Eskind.

***Raymond DuBois, M.D., Ph.D.**, is leaving his position as director of the Vanderbilt-Ingram Cancer Center later this year to return to his native Texas as provost and executive vice president of academic affairs at M.D. Anderson Cancer Center in Houston. At M.D. Anderson, DuBois will have responsibility and authority for: the research agenda, programs, finances and space; educational programs at all levels; and all activities related to the appointment, resourcing and mentoring of faculty. Vanderbilt-Ingram is conducting a national search and expects to have a successor named by summer. DuBois has also been nominated president-elect of the American Association for Cancer Research (AACR). His role in the AACR marks the third time a Vanderbilt-Ingram leader has served as president of the organization. ***Lynn Matrisian, Ph.D.**, director of Cancer Biology, and ***Harold Moses, M.D.**, director emeritus of Vanderbilt-Ingram, were both elected AACR president in recent years.

Marilyn Dubree, M.S.N., R.N., has been named to the newly created position of Chief Nursing Officer for all Vanderbilt University Medical Center operations. For more than 12 years, Dubree has served in the official role of Chief Nursing Officer for Vanderbilt University Hospital and the Monroe Carell Children's Hospital at Vanderbilt and has handled additional operational leadership duties. In her new position, she will be responsible for all nursing at VUMC. She will set the strategic mission and vision for nursing, evidence-based practice, innovation, an added emphasis on nursing research and institutional development while continuing to raise standards for quality. She will continue to oversee nurse leaders and the 3,000 nurses throughout the Medical Center. Dubree has also been named to the board of directors for Special Olympics Tennessee.

James Goldenring, M.D., Ph.D., has been appointed to the Gastrointestinal Cell and Molecular Biology Study Section of the Center for Scientific Review at the National Institutes of Health (NIH). His four-year term

Department of Pediatrics. Polk fills the role vacated by **Arnold Strauss, M.D.**

David Posch, chief operating officer of Vanderbilt Medical Group, has been named CEO of The Vanderbilt Clinic and executive director of VMG.

***Alvin Powers, M.D.**, recently named director of the Vanderbilt Diabetes Center (Endocrinology), ***Dan Spengler, M.D.**, chair of the Department of Orthopaedics (Sports Medicine), and ***Douglas Vaughan, M.D.**, chief of the Division of Cardiovascular Medicine, are among those named in *Men's Health* magazine's first annual listing of America's Top Doctors for Men. The popular lifestyle and fitness magazine's list is based on medical research firm Castle Connolly's America's Top Doctors. The most recent edition of that list featured 49 Vanderbilt physicians.

W. Russell Ries, M.D., was recently named the first holder of the Carol and John S. Odess Chair in Facial Plastic and Reconstructive Surgery in the Department of Otolaryngology.

Marylyn Ritchie, 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 30 young scien-

tists it deemed to be up-and-coming principal investigators (PIs). The investigators were selected based on the quality of their existing research in the disciplines that comprise systems biology. They also had to be no more than five years into their first faculty or equivalent position.

L. Jackson Roberts, M.D., the T. Edwin Rogers Professor of Pharmacology and Medicine, and ***Jason Morrow, M.D.**, the F. Tremaine Billings Professor of Medicine and Pharmacology, received the 2006 Discovery Award from the Society for Free Radical Biology and Medicine. Roberts and Morrow, chief of the Division of Clinical Pharmacology, were honored for their discovery and pioneering studies of a series of compounds called isoprostanes.

Stephan Russ, M.D., a resident in the Department of Emergency Medicine, was recently chosen by Vanderbilt University School of Medicine students to receive the CANDLE (Caring, Advocating, Nurturing, Determination, Leadership and Empathy) Award. Recipients are nominated and chosen based upon their positive impact on the lives of physicians-in-training, and are recognized by their students as examples of excellence in medical education.

***Arnold Strauss, M.D.**, chair of the Department of Pediatrics and medical director of the Monroe Carell Jr. Children's Hospital at Vanderbilt, is leaving to become chief medical officer and director of the Children's Research Foundation at Cincinnati Children's Hospital Medical Center in Ohio. He has also been named chair of the Department of Pediatrics for the University of Cincinnati College of Medicine, and will serve as the seventh BK Rachford Chair.

Keith Wilson, M.D., director of the Research and Fellowship Training Program in the Division of Gastroenterology, Hepatology and Nutrition, was recently named a permanent member of the National Institutes of Health's (NIH) Gastrointestinal Mucosal Pathobiology Study Section. Wilson will review and critique 10 grants over the two days of each of three annual meetings and present his analysis of the proposals to the 13-member panel.



DEAN DIXON

Peter Wright, M.D., (above) chief of the Division of Pediatric Infectious Diseases, and **Sten Vermund, M.D., Ph.D.**, who directs the Vanderbilt Institute for Global Health, have been named to a new national group intent on increasing U.S. support for global health research. They are among the first 27 "ambassadors" named to the Paul G. Rogers Society for Global Health Research. The society was launched this summer with a \$1.2 million grant from the Bill & Melinda Gates Foundation by Research!America, a not-for-profit group that lobbies to make health research a higher national priority.

DEAN DIXON



***Jennifer Pietenpol, Ph.D.**, has been selected to lead the Vanderbilt-Ingram Cancer Center as interim director. Pietenpol, Ingram Professor of Cancer Research and professor of Biochemistry, will guide the center while a national search is under way for a successor to ***Ray DuBois, M.D., Ph.D.**

Amira Abbas, M.D., FE'97-'00, died, along with her two children, ages 10 and 4, when her automobile collided head-on with a tractor-trailer in Cumberland, Md. She was in private practice as a general cardiologist and on the medical staff of the Western Maryland Health System. She is survived by her husband, Feroz Padder, M.D.

***Leo Max Bashinsky, M.D.,** MD'43, died on July 22, 2006. He was 88. After completing military service, he practiced general pediatrics on Birmingham's Southside. In addition to his general practice, he saw patients at the Children's Hospital, the Crippled Children's Clinic, the polio ward at Hillman Hospital and Gateway Children's Home (formerly known as Mercy Home). He is survived by his wife of 61 years, Betty; sons, Leo III and **Robert Buford Bashinsky, M.D.,** MD'74; a daughter, Betty; nine grandchildren and five great-grandchildren.

Charles William "Bill" Beaven, M.D., MD'42, HS'42, died March 26, the day after his 95th birthday. Beaven moved to Hampton, Va., in 1947 where he co-founded the Children's Clinic in Newport News, practiced general pediatrics and specialized in pediatric diabetes for 37 years. Preceded in death by his wife, Diane, and daughters Susan and Betsey, he is survived by daughters Nancy, Tina, Lee and Beth; three stepchildren, Bill, Bob and Becky; 10 grandchildren and four great-grandchildren.

George W. Benedict, M.D., MD'63, died in Baltimore on Nov. 13, 2006. He was 69. A retired Baltimore endocrinologist and two-decade-long volunteer at Joseph Richey Hospice, Dr. Benedict taught at the diabetes center at Johns Hopkins and maintained a private practice in endocrinology from 1975 until his retirement in 2004. He was a co-author of "Mosby's Guide to Physical Examination," and had just completed his contribution for its sixth edition when he died.

He is survived by his wife of 41 years, Mary Iliff; two sons, Charles and William; and three grandsons.

William H. Blackburn, M.D., MD'52, HS'68, died April 4 at his home in Camden, Tenn. He was an avid sportsman, and in 1967 was appointed by Gov. Buford Ellington to the Tennessee Game and Fish Commission. He served as chair of the commission in 1976 as well as president of the Tennessee Conservation League in 1978. He is survived by his wife, Juanita; son, Stan; daughters Karen, Betsy, Amy, Angie, and Kathy; 13 grandchildren and one great-grandchild.

Ben V. Branscomb, M.D., HS'48, a researcher and pioneer in pulmonary medicine whose career spanned six decades, received the Lifetime Achievement Award in the *Birmingham Business Journal's* Health Care Heroes program. He was a distinguished professor emeritus at the University of Alabama at Birmingham and died in April.

Chester R. Burns, M.D., Ph.D., MD'63, of Galveston, Texas, died on Dec. 27, 2006, in New York. He had recently retired as professor from the University of Texas Medical School in Galveston. He is survived by his wife, Ann; daughter, Christine; son, Derek, and three grandchildren.

Benjamin F. Byrd Jr., M.D., MD'41, HS'45-'47, CF'00, died Dec. 7, 2006. He was a founding member of the board of overseers for Vanderbilt-Ingram Cancer Center and a hometown champion for cancer prevention and research. He was 88. Dr. Byrd leaves behind his wife, Allison, and their children, Benjamin III, M.D., a professor of Medicine in the Vanderbilt Heart Institute, Barney, Damon, Andrew, John and Evelyn, and 11 grandchildren.

William B. Crenshaw, M.D., CF'69-'94, died on Sept. 22, 2006, after a long battle with cancer.

He was an assistant clinical professor of Urology at VUMC. He is survived by his wife of 52 years, Jo Ann; three daughters, Jan, Tara and Courtney; a son, Bill; and 11 grandchildren.

Marshall A. Diamond, M.D., MD'57, died Feb. 16 in Nashville. He was an ophthalmologist in Rockville, Md., for 20 years, and moved to Columbia, S.C., in 1981 where he continued to practice ophthalmology until his retirement in 1995. He is survived by his wife, Ann; two sons, Scott and Richard; and three grandchildren.

Frank F. Ellis, M.D., MD'36, of Roanoke, Va., died Feb. 28. He was 96.

Orville Thomas Evans Jr., M.D., MD'62, died Nov. 6, 2006, at his home in Henderson, Ky. He was 70. In 1972, he joined Orthopaedics Associations Inc., in Evansville, Ind., and practiced with them until his retirement in 1996. He is survived by his wife of 33 years, Nancy; two daughters Rachel and Ellie three sons, Frederick, John and Nathan; and nine grandchildren.

***Randolph A. Frank, M.D.,** MD'48, died in West Palm Beach, Fla., on March 2. He was 81. Frank practiced psychiatry in Washington for 49 years, until his retirement in 2003. In addition to his private practice, he was a longtime consultant for the D. C. police, the Library of Congress and the CIA. He was preceded in his death by his wife of 45 years, Judith, and is survived by sons Randolph and J. Lanier; daughter Eleanor; and eight grandchildren.

Henry Monnier Gewin, M.D., MD'45, died in Mobile, Ala., on Feb. 1. He was 85. Dr. Gewin, the Founder's Medalist of his class, practiced at the Diagnostic and Medical Clinic in Mobile, where he remained until his retirement in 1994. He was a former chairman of the Mobile County Board of Health and a former president of the medical staffs of local hospitals. He was a clinical associate

professor in the Department of Internal Medicine at USA College of Medicine and was active in teaching in the residency program at Mobile General. He is survived by his wife of 60 years, Hilda; four sons, Bill, Chris, Jim and Robert; and five grandchildren.

***John Glover, M.D.,** MD'58, of Birmingham, Ala., died from complications from heart surgery on Jan. 4. He was 72. A specialist in peripheral vascular surgery, he was the program director for the surgical residency and at Beaumont Hospital in Royal Oak, Mich., and director of the Wound Care Center before retiring in 1999. Preceded in death by his wife, Jean, he is survived by sons Jeff and John, and four grandchildren.

James D. Gross, M.D., MD'55, of Osprey, Fla., died Jan. 12. His medical career included 31 years of service as director of laboratories in the Pathology department of St. Mary's Hospital in Streator, Ill. In 1997, he received the University of Tennessee at Chattanooga's "Distinguished Alumni Award," and in 2004, published his second book, a self improvement guide, "ONE: Returning to Wholeness." He is survived by his wife, Marilyn; daughter, Kathleen; three sons, Terrence, Brian and Kevin; and twin granddaughters.

Robert C. Hartmann, M.D., FA'52-'75, former director of the Division of Hematology, died April 30, 2006. He was 86. Dr. Hartmann was one of the original organizers of the American Society of Hematology and devoted his 60-year career to teaching, research and patient care. He left Vanderbilt in 1974 to join the new medical school at the University of South Florida as professor of Medicine and head of the hematology program. He is survived by his wife of 28 years, Joyce; daughters Kathy, Meg and Ellen; sons, Robert Jr., David and Richard; and stepchildren David and Robin.
Editor's note. In the Fall 2006

Vanderbilt Medicine, this obituary mistakenly identified William Hartmann, M.D. as the deceased. Vanderbilt Medicine regrets the error.

***William Inman Jr., M.D.,** MD'48, died Nov. 18, 2006, in Brunswick, Ga. He was 82. Dr. Inman was in general practice in Brunswick from 1954 until retirement in 1990. He was former president of the Georgia State Board of Medical Examiners, and the Glynn County Medical Society. He is survived by his wife, Mary (Bebee); two sons, William III and Barry; a daughter, Beth; and eight grandchildren.

John Joe, M.D., MD'95, died Aug. 8, 2006. He was an assistant professor of Surgery at Yale Medical School. He is survived by his wife, Cindy, children Molly and Charlie and parents, Dr. Charles and Mrs. HeeMee Joe of Nashville.

William L. Johnston, M.D., MD'42, died Nov. 14, 2006, in East Grand Rapids, Mich. He was 89. Dr. Johnston is survived by his wife, Beverly; daughters Sharon and Sarah; three grandchildren and two great-grandchildren.

***Albert Robert Lawson, M.D.,** MD'48, HS'50, FA'59-'60, CF'60-'89, died Dec. 15, 2006. He was in the private practice of Psychiatry for 25 years in Nashville, and was the staff psychiatrist at the Alvin C. York Veterans Administration Medical Center in Murfreesboro, Tenn., for 20 years prior to his retirement in 1996. He is survived by his wife, Ellen.

Conie Crittenden Lowry, M.D., MD'43, HS'44-'46, died Feb. 4. He moved to Murray, Ky., in 1952 and practiced medicine at the former Houston/MdDevitt Clinic and Murray-Calloway County Hospital. For 17 years, he was the only surgeon in Murray and Calloway County. He practiced for more than 50 years, retiring in July 2003. In addition to his practice, he was also active in the community. He is survived by his wife of 62 years, Betty; two children,

Duane and Conielyn; and one grandson.

Roy William Parker, M.D., MD'44, HS'44, CF'63, died Jan. 22 in Nashville. He was 86. Preceded in death by his wife, Ann, he is survived by his sons, John and Joe; daughter, Patricia, and three grandchildren.

C. Gordon Peerman Jr., M.D., MD'49, HS'49, '52-'54, CF'55-, died Oct. 17, 2006. He was 80. Following his retirement from practice, he was executive director of Medical Alumni Services and Professional Relations at Vanderbilt. He was active in a number of leadership roles including serving as president of the Nashville Academy of Medicine, the Tennessee Medical Association and the Nashville Ob-Gyn Society. He is survived by his wife, Mary Alice; three sons, C. Gordon Peerman III, William and Robert; and other relatives.

DeSaussure (Dess) Philpot Jr., M.D., MD'44, HS'48, died March 29 in Augusta, Ga. He was 85. The first resident in Vanderbilt Hospital's newly organized Department of Psychiatry, Dr. Philpot had a 40-year career as a psychiatrist in New York City. He is survived by a sister, niece and several cousins.

Charles Chandler Randall, M.D., MD'40, FE'48, FA'51-'58, died March 31 in Ridgeland, Miss. A resident of Jackson, Miss., since 1957, he was an authority on herpes and pox viruses, and was professor emeritus of Microbiology at the University of Mississippi Medical Center, having served as chairman of the department from 1957-1978 and as chair of Graduate Studies and Assistant Dean of the School of Medicine for Graduate Studies. At Vanderbilt, he served as acting head of the Department of Microbiology from 1955-1957. Preceded in death by his wife, Virginia, and a son, Jay, he is survived by sons Gillette and Stephen, and two grandsons.

Robert Rhamy, M.D., FA'64-'82, died Sept. 14, 2006. He was 79. Dr. Rhamy was chair of the Department of Urology from 1966 until 1981. A lectureship named after Dr. Rhamy and Harry S. Shelley, M.D., former chief of the Division of Urology at Nashville Veterans Administration Hospital, is held annually at Vanderbilt. Dr. Rhamy joined the University of Miami Medical School faculty in 1983 and practiced medicine in Miami until his retirement in 1997. He is survived by his longtime companion, Florence; daughter, Jennifer; son, Robert Jr., and three grandchildren.

Frank Allen Shemwell, M.D., MD'48, died July 27, 2006, in Paducah. He was 81. He was a surgeon at Riverside, Lourdes, and Western Baptist Hospitals. He also served as an emergency room physician at Riverside Hospital, and then became a general practitioner. He is survived by three daughters, Kathryn, Cynthia and Carolyn; a son, Allen; 12 grandchildren and five great-grandchildren.

Robert Shirey, M.D., MD'42, died on Sept. 26, 2006, in Hillsboro, Texas. He was 91. He and his family moved to Hillsboro in 1949, where he began his practice at Boyd Sanitarium. He practiced general medicine and surgery at Hillsboro Clinic Hospital, where he served as both chief of staff and chief of surgery, until he retired in 1985. In 1974, he received the distinguished alumnus award from VUSM.

Abram Shmerling, M.D., MD'52, HS'52, died in Nashville on Nov. 6, 2006. He was 79. After a residency at Barnes Hospital in St. Louis, he returned to Nashville in 1954 to practice internal medicine, and worked for 40 years at the Woodbine Clinic and Southern Hills Hospital. He was Southern Hill's first chairman of the board. He is survived by his wife, Frances; sons Jim, Michael and Rob; daughter Judy, and 10 grandchildren.

***Marvin Silver, M.D.,** MD'47, died March 22 in Bradenton, Fla. He was 82. A longtime Bradenton resident and cardiologist, he served as chief of staff of Manatee Memorial Hospital and co-founded the electrocardiogram department. He established an internal medicine and cardiology practice in Bradenton serving patients for 46 years before his retirement in 2000. He is survived by his daughters, Lauren and ChrisAnn, and three grandchildren.

Willard "Bill" Oakes Tirrill III, M.D., MD'61, died March 6 in Nashville. He was 76. He worked in private practice from 1965-1989. He is survived by his wife, Mary; daughters Mary Bess, Anna and Susan; a son, Willard; and five grandchildren.

Marcus J. Zbar, M.D., MD'51, died Oct. 1, 2006, in Florida where he had lived for the past 52 years. He operated a private practice there for 45 years where he oversaw pathology labs in several area hospitals. He became chief of staff at Aventura Hospital was later appointed Pathologist Emeritus by both Aventura Hospital and the South Broward Hospital District. He is survived by his wife, Muriel, children and grandchildren.

Graduation 2007 Photo Gallery

Pictured here:

1. VUSM Dean Steven Gabbe, M.D., addresses students, faculty and spectators from the stage of Ryman Auditorium.

2. Graduation at the Ryman

3. David Yung-Ping Chong, right, received his diploma from his mother, Catherine Chong, M.D., and brother, Paul Chong, M.D.

4. Colin Crosby and Kate Cleaver view Loretta Lynn's gold-spangled stage attire displayed in the Ryman Auditorium.

5. VUSM's Jessica Rene Sparks Lilley reflects on the ceremony.

6. Eric Musiek, right, received his M.D. diploma from his wife, Amy Musiek, M.D., MD'04 and current resident in the Department of Medicine, and his Ph.D. from Jason Morrow, M.D., chief of Division of Clinical Pharmacology.

7. Founder's Medalist Kristina Collins is congratulated by Dean Gabbe.

8. VUSM graduate Robert Mutter, right, at the Ryman with, from left, Dean Gabbe, his father, Thomas Mutter, M.D., and his cousin, Frederick Simonie, M.D.

9. Andrea Hedley-Williams, Nicole Lynch, Stephanie Morgan and Meredith Moss await their Doctor of Audiology degrees at the Ryman Auditorium graduation ceremony.



PAUL LEVY



TIM GUILFELLEN



PAUL LEVY



MARY DONALDSON



PAUL LEVY



6

7



DANA JOHNSON

8



PAUL LEVY

9



MARY DONALDSON

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