

**SCENE
ON CAMPUS**

Jeff Balser, MD, PhD, Dean of Vanderbilt University School of Medicine, right, celebrates graduation with members of the School of Medicine's Class of 2024.



28

"The hope this treatment brings is incredible — the idea or chance that this can alter the progression of the disease and make a child's life better."

— Jonathan Soslow, MD, MSCI

ON THE COVER

In 2025 Vanderbilt University School of Medicine is celebrating 150 years of training physician leaders, advancing research and delivering patient-centered, personalized care.

ONLINE EXTRAS

 **History in photos**
Explore a timeline of the School of Medicine's 150 years.

 **View inspiring video**
Experience Gobi March 2024 alongside James Crowe Jr., MD.

DEPARTMENTS

- 2 From the Dean
- 3 Conversations
- 6 Around the Medical Campus
- 9 Q+A
- 11 Did you know?
- 12 In My Life
- 36 VUSM Community

FEATURES

- 14 **A Legacy of Shaping Tomorrow's Leaders**
Vanderbilt University School of Medicine celebrates 150 years
- 22 **Minutes Saved Mean Lives Saved**
Forty years of LifeFlight transports equals a remarkable legacy
- 26 **The Man Who Gave Angel 1 its Wings**
Dean Driver helped get babies safely delivered to care
- 28 **How Fast Can He Run**
The transformative impact of pediatric gene therapy
- 32 **The Obstacle is the Way**
Ultramarathon helps this master of monoclonal antibodies find balance

VANDERBILT MEDICINE

Vanderbilt Medicine is published by Vanderbilt University Medical Center in cooperation with the VUMC Office of News and Communications.

Copyright 2025 © Vanderbilt University

EDITOR
Jill Clendening

DESIGN AND ART DIRECTION
Diana Duren

CONTRIBUTING WRITERS

Lucie Alig
Craig Boerner
Danny Bonvissuto
Jill Clendening
Holly Fletcher
Paul Govern
Nancy Humphrey
Payton Baggett Reynolds
Kathy Rivers
Amanda Ruelas
Bill Snyder
Wayne Wood

PHOTOGRAPHY/ILLUSTRATION

David Bailey
Donn Jones
Anne Rayner
Erin O. Smith
Susan Urmey

DIRECTOR OF PUBLICATIONS

Christina Echegaray

EXECUTIVE DIRECTOR OF DIGITAL COMMUNICATIONS

Wayne Wood

PHOTO ILLUSTRATION

Diana Duren

EDITORIAL OFFICE

Office of News and Communications
T-5200 Medical Center North
Vanderbilt University
Nashville, TN 37232-2390

VANDERBILT MEDICAL
ALUMNI ASSOCIATION
PMB 407731

2301 Vanderbilt Place
Nashville, TN 37240
615-322-6146
800-288-0266
Fax: 615-936-8475

E-mail: medalum@vanderbilt.edu

Visit us at:
medschool.vanderbilt.edu/vanderbilt-medicine

Marking extraordinary milestones

DAVID BAILEY



As we celebrate Vanderbilt University School of Medicine's sesquicentennial, I find myself reflecting on the remarkable journey that brings us to this moment. For 150 years, Vanderbilt has been at the forefront of biomedical science, education and patient care.

We each spent time learning and connecting in the halls and clinics of this storied institution, absorbing the lessons that would propel our lives of service to patient care and research.

The buildings have changed, and so has the technology, since the first class of students came to this campus to learn — but the spirit and commitment to a healthier tomorrow remains as resolute as ever.

It's amazing to stroll through the History of Medicine Collections at the Annette and Irwin Eskind Family Biomedical Library and Learning Center. This collection of more than 15,000 volumes and artifacts bears testament to Vanderbilt's legacy, each item telling a story of progress, determination and healing. (See pages 20-21.)

Yet even the past year has brought significant milestones.

Our commitment to pioneering health care is exemplified by LifeFlight's 40th anniversary. From its inception in 1984, this program has completed nearly 77,000 flights and helped over 80,000 patients. Alongside it, Angel Transport marked its golden anniversary, reminding us how ingenuity and a commitment to saving lives can change reality. An intrepid Vanderbilt engineer worked with the legendary VUSM alumna Mildred Stahlman on the conversion of a panel truck into Vanderbilt's first pediatric transport vehicle — a testament to the innovative spirit that defines us. (See pages 22-27.)

Today, that same spirit drives Vanderbilt's leadership in pediatric gene therapy. At Monroe Carell Jr. Children's Hospital at Vanderbilt, we're witnessing miracles as children with Duchenne muscular dystrophy regain their ability to run and play! As one of the first programs to offer these leading-edge therapies, we're advancing the art of the possible while transforming lives. (See pages 28-31.)

Every day, I witness our alumni, faculty and students pushing boundaries, challenging conventions and improving lives, and I remember why I am proud to be a part of this community. Even as our amazing Vanderbilt history shapes us, our continued dedication to innovation, education and compassionate, personalized care defines us — attracting students and faculty to join us in leading the innovation that reshapes care here in Middle Tennessee and worldwide.

Here's to making history for the next 150 years. ■

Jeff Balser, MD, PhD

President and CEO, Vanderbilt University Medical Center
Dean, Vanderbilt University School of Medicine



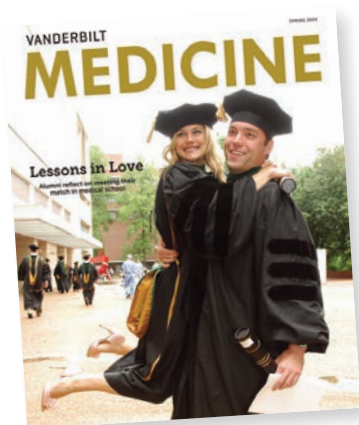
Images through time on the cover

Background: Annette and Irwin Eskind Family Biomedical Library and Learning Center
1. Ernest Goodpasture, MD **2.** Vanderbilt University Hospital **3.** SARS-CoV-2 virus **4.** James Crowe Jr., MD **5.** Vanderbilt Health One Hundred Oaks **6.** Vivien Thomas **7.** Patients in beds at old hospital **8.** Surgery in a VUH operating room **9.** An early book on anatomy from Vanderbilt University's History of Medicine Collections **10.** A nursing student assists with surgery **11.** Ribbon cutting for the reopening of the Annette and Irwin Eskind Family Biomedical Library and Learning Center **12.** Aerial view of the original hospital on the Main Campus, now Medical Center North **13.** Nurses in a laboratory **14.** Nobel Prize winner Earl Sutherland Jr., MD **15.** Renovated classroom space at Annette and Irwin Eskind Family Biomedical Library and Learning Center **16.** Louise Rector Allen, MD **17.** Recent VUSM graduates **18.** 1875 valedictory address of William Campbell, MD **19.** Mildred Stahlman, MD **20.** A LifeFlight helicopter **21.** An 1895 postcard image of medical building at Fifth and Elm **22.** Nobel Prize winner Stanley Cohen, PhD **23.** Monroe Carell Jr. Children's Hospital at Vanderbilt **24.** Officers of the Vanderbilt Unit during World War I

CONVERSATIONS AROUND THE MEDICAL CAMPUS



We want to hear from you! Connect with us on Facebook, X, YouTube, Flickr and Instagram.



Comments on the SPRING 2024 issue of *Vanderbilt Medicine*:

LEADING WITH HIS LOVE OF MUSIC

That's awesome. Congratulations for all you have accomplished.

– Wanda Smith

MUSIC'S HEALING POWER

What a great idea! I'm so glad you're able to help make the day better for so many people.

– Katie Smith

So awesome! How do you get music therapy requested? I work there and didn't realize

this was a thing! How amazing.

– Amy Henderson

I'm sure your services are greatly appreciated and in high demand. Curious to know how many music therapists work at Vanderbilt.

– Cindy Lybarger

Editor's note: There are two music therapists who work with adult patients at Vanderbilt University Hospital's Palliative Care, Myelosuppression and Oncology units, and the infusion clinic.

Two music therapists at Monroe Carell Jr. Children's Hospital at Vanderbilt use music to help with chronic pain, physical rehabilitation, psychiatric symptoms, and coping with medical procedures, hospitalization and illness.

A music therapist can be requested by a nurse or physician through Epic (the electronic medical record system). If families are interested, they can let their nurse know.

JOIN THE CONVERSATION

Post comments to our website: medschool.vanderbilt.edu/vanderbilt-medicine or email jill.clendening@vumc.org or on Facebook: facebook.com/VUmedicine

QUOTABLE:

"You think about just the sheer number of people who could be eligible for taking these products, and it starts to really boggle your mind thinking about how to pay for that."

STACIE DUSETZINA, PHD, professor of Health Policy, on the cost of drugs to treat Type 2 diabetes and obesity
The New York Times
April 24, 2024

"I think of these viruses like submarines, lurking undetected, and then suddenly shooting cancer torpedoes."

WILLIAM SCHAFFNER, MD, professor of Health Policy, on viral infections like hepatitis B that can lead to cancer
The New Yorker
Dec. 18, 2024

"There's been a great deal of attention in the schools that I've worked with on more substantial cleaning efforts of those high-touch surfaces, because most of these pathogens can live for hours to days to even weeks."

C. BUDDY CREECH, MD, MPH, director of the Vanderbilt Vaccine Research Program and Edie Carell Johnson Professor of Pediatrics, on healthier classrooms
Education Week
Dec. 9, 2024

Find us on Instagram at medschool.vanderbilt.edu/instagram



[vumc_orthores](#)
Thank you to @nthdimensions and @aofas1 for hosting an awesome Bioskills session at Meharry Medical College. Dr. Gallagher (foot and ankle guru) and some star residents had a great time connecting with future ortho pods! #vumc_orthores



[vumcmedicineresidency](#)
Second annual resident snow tubing extravaganza! No sleds, no problem. #vumcmedicineresidency



[vumedicine](#)
Medical physicists-in-training by day, pro white water rafters by night. Our doctoral and Master of Science in Medical Physics students can truly do it all. #VandyMed



A group of runners are captured in motion during the Shade Tree Trot. In the foreground, two male runners are prominent. The runner on the left is wearing a dark green t-shirt with 'SHADE TREE' and a silhouette of a tree, along with the number '413'. He is also wearing a rainbow headband and blue shorts. The runner next to him is wearing a blue t-shirt and blue shorts, with a purple headband. They are running on a grassy field with a blurred background of other participants and trees. A circular callout box in the top right corner provides information about the event.

A CLOSER LOOK

The 16th annual Shade Tree Trot, which helps fund the medical and nursing student-run Shade Tree Clinic, raised \$25,794 in 2024.



Taking a proactive approach

VUMC joins national effort to waylay future viral threats

Vanderbilt University Medical Center has joined an extraordinary national effort to develop and stockpile new vaccines and antibody therapies against a host of viral threats to prevent another pandemic.

Pending the availability of funds, the National Institute of Allergy and Infectious Diseases of the National Institutes of Health expects to commit approximately \$100 million annually to the program, called ReVAMPP, (Research and Development of Vaccines and Monoclonal Antibodies for Pandemic Preparedness), the NIH announced in 2024.

Developed in the wake of the COVID-19 pandemic, which killed millions of people worldwide and cost the United States economy trillions of dollars, ReVAMPP will support a coordinating center and seven research centers, including VUMC, with a focus on nine virus groups that pose the greatest risk.

VUMC's three-year, \$13 million per year grant (number U19AI181979) will enable researchers at the Vanderbilt Center for Antibody Therapeutics (VCAT) to accelerate their investigations of bunyaviruses, which include life-threatening respiratory and hemorrhagic fever viruses, and picornaviruses, notably enterovirus D68.

They also will contribute to ReVAMPP projects led by the University of Texas Medical Branch in Galveston and Washington University School of Medicine in St. Louis targeting other viral threats, including mosquito-transmitted Eastern equine encephalitis.

"We have long stated that antibodies and vaccines for emerging infections should be generated and tested prior to large outbreaks, not after disaster has occurred," said James Crowe Jr., MD, director of the VCAT, formerly known as the Vanderbilt Vaccine Center, and the grant's principal investigator. "This new federal program gives us the support to prepare ahead of time for prevention and treatment of some of the most lethal infections that threaten to cause human epidemics."

Like SARS-CoV-2, a member of the coronavirus family that causes COVID-19, hundreds of viruses known to cause disease in humans evolve rapidly, making it difficult to develop long-lasting methods to contain them.

To meet this challenge, ReVAMPP is focusing on "prototype pathogens," representatives of each virus group. Researchers will look for "sites of vulnerability" in the prototypes that can inform development of antibody therapies and vaccines capable of blocking every group member.

Through its new Bunyavirus and Picornavirus Pandemic Pathogen Preparedness (BP4) Center, the VCAT will assemble a consortium of 20 leading investigators in picornavirus and bunyavirus virology, immunology, vaccine biology and antibody sciences from universities, research institutes and industry partners across the country.

Housed in a state-of-the-art lab atop a medical research tower on the Main Campus, the VCAT is uniquely prepared to contribute to ReVAMPP, said the center's associate director, Robert Carnahan, PhD, professor of Pediatrics and of Radiology and Radiological Sciences.

VCAT researchers have developed techniques for rapidly isolating clones of white blood cells that make antibodies targeting viral proteins. Once identified, these "monoclonal" antibodies are refined into potential therapies that can latch onto and "neutralize" specific viruses.

The VCAT is perhaps best known for isolating in early 2020 — and in a record 25 days — monoclonal antibodies that neutralize the COVID-19 virus.

In late 2021, the Food and Drug Administration approved a long-acting combination of antibodies discovered at VUMC and developed by the global biopharmaceutical company AstraZeneca for emergency use to prevent COVID-19 in high-risk adults and children.

Five years earlier, VCAT researchers reported the isolation of monoclonal antibodies that were cross-reactive for the viruses that cause monkeypox (now called mpox), cowpox and smallpox.

The World Health Organization declared mpox a public health emergency of international concern. Crowe said his group is working with the federal government and industry to advance to clinical testing antibodies they had isolated in 2016.

"We already did the discovery work," said Crowe, the Ann Scott Carell Professor and professor of Pediatrics and Pathology, Microbiology and Immunology. "They're ready for clinical trials at the moment we need them, instead of starting from scratch."

Earlier, VCAT researchers isolated neutralizing antibodies against enterovirus D68, which has been linked to a rare but devastating polio-like illness in children, acute flaccid myelitis. After further development and testing in partnership with two biotechnology companies, VUMC launched the first-in-human trial of one of the antibodies in June 2024.

Also in June 2024, the VCAT began a "sprint" sponsored by the U.S. Department of Defense to discover neutralizing antibodies against hantaviruses, for which there currently are no approved vaccines or treatments. Transmitted primarily by rodents, hantaviruses can cause severe upper respiratory disease with a fatality rate approaching 40%.

Long before COVID-19, Crowe and his colleagues were advocating for a broad-based, proactive program of antibody and vaccine discovery and development. ReVAMPP, he said, is a big step in the right direction. ■ *Bill Snyder*

STUDY LINKS COGNITION AND BRAIN NETWORKS BEFORE THE FIRST PSYCHOTIC BREAK



Early detection opens the door for noninvasive intervention for those with treatment-resistant symptoms of psychotic disorders like schizophrenia.

After correlating cognitive impairment and brain network organization in people diagnosed with psychotic disorders, Vanderbilt University Medical Center researchers discovered the same link in those who hadn't had a first psychotic episode. Their groundbreaking study was published in *Biological Psychiatry*.

"This link between cognition and brain networks is present even prior to the first psychotic break, suggesting an opportunity for early diagnosis and intervention for the treatment-resistant symptoms of psychotic disorders like schizophrenia and bipolar disorder," said first author Heather Burrell Ward, MD, director of Neuromodulation Research at VUMC.

Using data from two research consortia — the Human Connectome Project for Early Psychosis and the North American Prodrome Longitudinal Study — plus MRI and cognitive tests, Ward and her team observed that, in individuals with psychotic disorders, cognitive impairment is linked to brain network organization.

After analyzing data from individuals considered at risk for psychotic disorders, but who had not yet had a first psychotic episode, they identified the same brain network-cognition relationship only in those who would eventually develop psychosis.

"There had been a concern that this kind of brain imaging study wasn't possible at all and that this kind of brain-wide association study linking fMRI signals to cognition/behavior would require thousands of participants to identify reliable findings," she said. "We hypothesized that this limitation could be overcome with careful choices about cognitive testing and MRI analysis. We were excited to see that not only could our results be replicated, but that we could observe these strong brain network-cognition links in at-risk individuals even before they were diagnosed with psychosis."

There are no medications to treat cognitive impairment associated with schizophrenia and other psychotic disorders. This impairment is often present by the time an individual has their first psychotic break, making early detection and intervention critical.

Ward is the principal investigator leading an NIH-funded clinical trial testing repetitive transcranial magnetic stimulation (rTMS, a form of noninvasive neuromodulation) for people with psychotic disorders.

"The next step is to test if this brain signature is malleable — that is, can we modulate this circuit with rTMS and improve cognitive performance," she said. ■ Danny Bonvissuto

Research Roundup

Study reveals surgeons have most complaints of bad behavior

Co-worker reports about physicians' unprofessional behaviors from 193 hospitals were analyzed for a study reported in *JAMA Network Open*. It turns out that surgeons draw the most complaints.

William Cooper, MD, MPH, Steven Webber, MBChB, and colleagues pulled reports from the Coworker Observation Reporting System (CORS), which is administered by the Vanderbilt Center for Patient and Professional Advocacy. CORS is part of a program of tiered interventions aimed at curbing unprofessional behaviors.

The likelihood of being named in a CORS report varied significantly by specialty area. Surgeons were most likely at 13.8%, followed by nonsurgeon proceduralists, 12.0%; emergency medicine physicians, 10.9%; and nonsurgeon nonproceduralists, 5.6%.

AI could help patients ask their care teams better questions

AI has proven better than doctors at drafting responses to patients' written questions. Now, a Vanderbilt University Medical Center study suggests greater advantages in using AI to help patients write more effective messages to their care teams.

Siru Liu, PhD, Adam Wright, PhD, and colleagues explored using AI to help patients craft more effective messages to their health care providers through patient portals.

In a blinded test reported in the *Journal of the American Medical Informatics Association*, the team found their custom-trained, large language model, CLAIR, produced follow-up questions with similar clarity and conciseness, and higher utility, than actual follow-up questions written by the care team.

By comparison, the GPT-4 model from OpenAI generated more com-

plete but less clear questions for the scenarios tested.

The study was supported by the National Institutes of Health (grants R01LM014097, R01AG062499, R01LM013995).

What's all the tuft about?

Intestinal tuft cells are a rare cell type first identified in 1956, and a recent study suggests the unique cytoskeleton of these cells could unlock new insights into human health.

Tuft cells have finger-like protrusions that extend from their apex, creating a "tuft" that projects into the lumen of the gut. These structures are supported by actin, a molecule important for a cell's structural integrity.

Tuft cells can sense harmful microorganisms, like parasitic worms, and generate an immune response. Tuft cells also have roles in restoring the intestine from chronic inflammation in ulcerative colitis and Crohn's disease by secreting anti-inflammatory molecules.

Graduate student Jennifer Silverman and her mentor Matthew Tyska, PhD, who holds the Cornelius Vanderbilt Chair in Cell and Developmental Biology, utilized advanced imaging techniques to detail the microscopic structure of intestinal tuft cells. Using single-cell sequencing data from the laboratory of Ken Lau, PhD, professor of Cell and Developmental Biology, they identified tuft cell-specific actin binding proteins that could support both the tuft cytoskeleton and cellular transport of molecules along this structure. The researchers suggest these tuft cell-specific proteins aid in the sensing of danger molecules and the transport of tuft cell-derived anti-inflammatory molecules.

Their discovery can potentially be harnessed to battle intestinal inflammatory diseases.

+ BY THE NUMBERS

174 adult and pediatric heart transplants were performed at VUMC in 2024, a world record.

5,704 nautical miles during a 2024 trip to Alaska was the farthest VUMC has traveled for an organ to transplant.

Even more motivation to move

It's well known that spending too much time on the couch can shorten your life.

Now, Vanderbilt University Medical Center researchers have shown that moderate-intensity, leisure-time physical activity can partially reduce the elevated risk of death from all causes due to prolonged sitting time.

In a study of 8,337 predominantly low-income and Black Americans ages 65 and older, the researchers found those with the longest "sitting time" — more than 10 hours a day — had the highest mortality risk.

Their report, published in the *American Journal of Preventive Medicine*, followed Southern Community Cohort Study participants who recorded their daily sitting time and leisure-time physical activity between 2002 and 2009.

"High sedentary behavior is an independent risk factor for all-cause and (cardiovascular disease) mortality," the researchers concluded. "These findings highlight the importance of promoting both leisure-time physical activity and reducing sedentary behavior for disease prevention."

"We all sit a lot every day," said the paper's corresponding author, Wei Zheng, MD, PhD, MPH, the Anne Potter Wilson Professor of Medicine and director of the Division of Epidemiology and the Vanderbilt Epidemiology Center.

"I can easily sit more than 10 hours a day doing my work and having meetings," Zheng said. "I think we should encourage everyone to reduce sitting time, such as using a standing computer desk."

The study was supported by National Institutes of Health grant U01CA202979 and by the Anne Potter Wilson chair endowment to Vanderbilt University. Supported by the NIH's National Cancer Institute, the Southern Community Cohort Study follows the health of a large cohort of people in 12 southeastern states. ■ Paul Govern and Amanda Ruelas

Study identifies preoxygenation method that reduces hypoxemia and cardiac arrest risk

For critically ill adults undergoing emergency tracheal intubation, hypoxemia (low levels of oxygen in the blood) increases the risk of cardiac arrest and death. In current clinical care most critically ill adults receive preoxygenation using an oxygen mask.

The Pragmatic Trial Examining Oxygenation Prior to Intubation clinical trial was led nationally by Vanderbilt University Medical Center and involved researchers at the University of Wisconsin School of Medicine and Public Health. The study compared the two most commonly used methods to preoxygenate patients prior to tracheal intubation: preoxygenation with noninvasive ventilation and preoxygenation with an oxygen mask.

The study, published in the *New England Journal of Medicine*, showed that the noninvasive ventilation method using a tight-fitting respiratory mask connected to a BPAP — bilevel positive airway pressure — machine reduced the risks associated with the intubation.

"More than 1.5 million critically ill adults undergo emergency tracheal intubation each year in the United States," said Jonathan Casey, MD, MSCI, assistant professor of Medicine in the Division of Allergy, Pulmonary and Critical Care Medicine at VUMC and a senior principal investigator in the trial.

"Hypoxemia occurs during 10% to 20% of those tracheal intubations in the emergency department or intensive care unit and may lead to cardiac arrest and death. Our study found that among critically ill adults undergoing tracheal intubation, preoxygenation with noninvasive ventilation decreases the incidence of hypoxemia during intubation compared to preoxygenation with an oxygen mask."

The investigators hoped that preoxygenation with noninvasive ventilation would prevent hypoxemia during intubation, defined as an oxygen saturation less than 85% during the interval between induction and two minutes after tracheal intubation.

In the 1,301 patients enrolled, hypoxemia occurred in 57 of the 624 patients (9.1%) in the noninvasive ventilation group and 118 of the 637 patients (18.5%) in the oxygen mask group.

Further, it appeared that by preventing hypoxemia during tracheal intubation, preoxygenation with noninvasive ventilation also prevented cardiac arrest, the most feared complication of tracheal intubation. Cardiac arrest occurred in one patient (0.2%) in the noninvasive ventilation group and seven patients (1.1%) in the oxygen mask group.

Prior to this trial, international guidelines stated that preoxygenation with either noninvasive ventilation or an oxygen mask is acceptable — guidance that results of this trial are likely to change. ■ Nancy Humphrey



A typical setup for an intubation with high-risk features for anatomical difficulty.

LAWRENCE B. STACK, MD, VIA CREATIVE COMMONS

+ BY THE NUMBERS

9,400

acute trauma patients treated at Vanderbilt University Hospital annually

363

beds for pediatric patients at Monroe Carell Jr. Children's Hospital at Vanderbilt, with more coming soon

Q+A

Neuropsychologist Douglas Terry, PhD, works with the National Football League as the senior director of Research, a role focused on initiatives to enhance the health and safety of NFL players. This is an extension of Terry's expertise in sport-related concussion and cumulative head impacts.

Q. What goes through your mind when you see a player take a hard hit?

A. It's always difficult to see someone get injured and be symptomatic while in the national spotlight. We've been seeing this on the field for years, but in the past, fans might not have recognized the symptoms or had enough clarity on the broadcast to fully realize what was happening.

We need to understand how the injury to the brain is impacting the player and how to rehabilitate them safely and appropriately. As researchers, due diligence is on us to understand the difference between what things look like on the broadcast versus what the athlete is truly experiencing from a physiological and neurological level. Surprisingly, we've learned when you compare the recovery times of people who had a concussion with a loss of consciousness versus not having a loss of consciousness, there are very minimal differences in their recovery time.

That's not what we would have assumed, because when you see someone lose consciousness, you tend to think the brain injury might be worse or more severe, or it might take someone longer to recover. Some research has supported that gut feeling, but most research has not. It's only through several studies examining the same topic (in this example, loss of consciousness vs. not) that we feel comfortable changing our thinking about the injury.

Q. Concussions happen in everyday life without the fanfare of prime-time TV. How has this impacted both research and treatment?

A. We know things like car accidents and slips and falls are the leading causes of concussions. It's harder to study those individuals because some might go to urgent care, some might go to their primary care doctor, or some might go to a hospital. Follow-up care tends to be very variable in these individuals, and it's difficult to study because the places these individuals get seen are often not set up for conducting systematic research.

This means we're not able to capture all concussions out there. And if you only look at concussions where someone ends up going to the emergency room, you might only see the scariest or most severe concussions versus other concussions that did not require emergency room care.

Most concussions, around 80%, get better in two to four weeks with minimal treatment. Given that, the injuries weren't rising to the threshold for it to be more systematically studied by the academic and research community.

Q. Why is it easier to study concussions in pro athletes?

A. Concussions are traditionally tough to study, because these are injuries treated out in the community by a first-line provider, often without specialty follow-up.

Athletes, including professional athletes, represent a unique model because they are plugged into a medical system. Athletic trainers and team doctors monitor athletes before a concussion, at the time of concussion, immediately after a concussion, and daily until they return to play. It's end-to-end observation that allows us to comprehensively research it from start to finish.

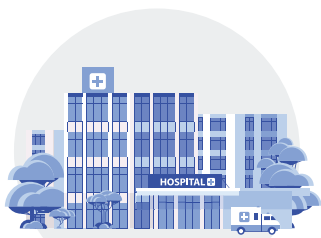


A CLOSER LOOK AT VANDERBILT UNIVERSITY MEDICAL CENTER

Vanderbilt University Medical Center is one of the largest academic systems in the Southeast, providing patient care, conducting research, and training the next generation of health professionals. VUMC employs nearly 43,000 nurses, physicians, researchers, trainees and more, making it the largest nongovernment employer in Middle Tennessee, as of fiscal year 2024.

VUMC has steadily grown to reach more people.

VUMC has increased the number of hospitals and licensed beds.



Number of hospitals



Number of licensed beds

VUMC hospitals and clinics reach across Tennessee:



Outpatient clinic locations



Specialty clinics



Ambulatory surgery centers

Vanderbilt University Hospital
Monroe Carell Jr. Children’s Hospital at Vanderbilt
Vanderbilt Psychiatric Hospital
Vanderbilt Stallworth Rehabilitation Hospital
Vanderbilt Wilson County Hospital
Vanderbilt Bedford Hospital
Vanderbilt Tullahoma-Harton Hospital

We have expanded our network of care.

The Vanderbilt Health Affiliated Network is a clinically integrated network of physicians, nurses and allied professionals transforming health care and strengthening communities. The network’s members include the most trusted providers across Tennessee and the surrounding states.



Providers



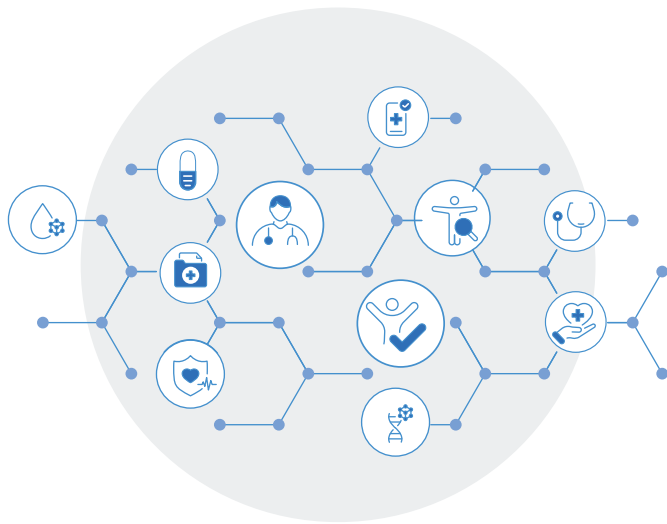
Hospitals



Health systems



Physician practices



We treat now 3.3 million patients annually.

VUMC has grown to treat patients in a wide variety of ways.



226,314
Telehealth appointments



213,000
Emergency department visits



81,000
Surgical cases



80,000
Hospital discharges



6,500
Home Health visits



3,400
LifeFlight air transports



809
Organ transplants

In My Life

CHRISTINA BAILEY, MD, MSCI'10

Associate professor of Surgery in the Division of Surgical Oncology & Endocrine Surgery and General Surgery Residency program director

Education includes undergraduate at Louisiana Tech University, medical school at Louisiana State University Health Sciences Center, general surgery residency at VUMC, MSCI degree at VU and fellowship in complex surgical oncology at University of Texas MD Anderson Cancer Center.

"As a cancer surgeon, the drive to do what I do stems from the profound impact cancer has on individuals and their families and the opportunity to make a tangible difference in their lives. Surgery often represents a chance for cure or significant symptoms relief, and the privilege of being entrusted with someone's care during such a vulnerable time is both humbling and motivating. One of my primary goals as a surgical oncologist is to ensure all patients have access to the best cancer care so they have the best possible outcomes. I work with a dedicated, multidisciplinary team of professionals here that shares this aim."

Photos by Erin O. Smith, Donn Jones and Susan Urmy



Bailey well understands the challenges and rewards of balancing career and family. She and her husband, Palms, have two energetic boys, Austin, 9, and Aiden, 5.



Family time might mean sharing a favorite hobby like baking or shooting hoops. (She's a former high school star basketball player.)





Taking time to talk through surgical options with a patient and their family is just as important to Bailey as her expertise in the OR as an oncological surgeon.



Bailey speaks with resident Emilee Larson, MD, in the Surgical Oncology Clinic. She has a love for mentoring, training and advising the next surgical leaders.



"I enter the operating room with a deep sense of focus and intention. I also reflect on the trust my patients and their loved ones have placed in me, which reinforces my sense of responsibility and purpose."

A circa 1920 view of the south campus of Vanderbilt University, the location of the Medical Department from 1911 to 1925. The image shows, left to right, the School of Dentistry, the administration building, the gymnasium and the Medical Department's Central Hall. The south campus is now the Richard H. Fulton campus owned by the Metropolitan Government of Nashville and Davidson County.



A LEGACY OF SHAPING TOMORROW'S LEADERS

Celebrating 150 years of training medical professionals,
advancing research and improving patient care

BY JILL CLENDENING + PHOTOGRAPHY COURTESY OF THE HISTORY OF MEDICINE COLLECTIONS AND VUMC NEWS & COMMUNICATIONS



One hundred fifty years ago, a small group of visionary Nashville physicians had an aspirational goal — to create a school of medicine to train physicians to better meet the South’s health care needs.

Looking across today’s bustling environs of Vanderbilt University School of Medicine (VUSM), it’s hard to envision the early years of the institution that today is one of the country’s top-ranked medical schools, with a stated mission of catalyzing the advancement of impactful discovery, servant leadership and lifelong learning.

A modest beginning

In the mid-19th century, medical education in the United States was in its infancy.

As was the case at Vanderbilt, medical schools were often founded by groups of physicians who paid themselves for their lectures and demonstrations with students’ fees. Most balanced caring for patients in their private practices with their teaching obligations.

VUSM welcomed its first class in fall 1874, operating initially as a shared program with the University of Nashville’s existing medical department. The two institutions shared space at the Nashville Medical College Hospital on Market Street (now Second Avenue) in downtown Nashville.

In 1875, Vanderbilt University (VU) — founded two years earlier through a generous grant from Commodore Cornelius Vanderbilt — awarded its first degree, a Doctor of Medicine degree, to Henry William Mor-

gan. The future head of Vanderbilt’s Dental Department joined 60 of his peers in accepting this honor.

Establishing a singular presence

Under the leadership of VU Chancellor James H. Kirkland, the University of Nashville Medical School and Vanderbilt Medical School separated in 1895. “The Comet” — VU’s first yearbook — documented this momentous occasion:

“Vanderbilt University has taken another stride forward, and the medical profession of the South is especially in her debt. We are proud to record the fact that Vanderbilt has reorganized and taken full control of her Medical Department. It will be conducted on a high plane and in keeping with the most progressive ideas in medical education.”

A medical school facility — described as the “most complete of its kind in the South” — was constructed on the corner of Fifth and Elm streets in downtown Nashville. It included consultation and exam rooms, an apothecary, laboratories, surgical and medical demonstration rooms and more.

William L. Dudley, professor of Chemistry in the College of Arts and Sciences, was appointed medical dean, and admission requirements were raised to require a high school diploma. The course of study was lengthened to three years, and basic sciences laboratory work was added. In 1898, the quality of VUSM’s medical education was again upgraded as instruction increased to four years.

Driven by lessons learned from the Civil War, a nursing training program was established in 1908 overseen by the hospital superintendent. This became the School of Nursing in 1926.

These efforts to provide an exemplary medical education were praised in the 1910 publication of the landmark “Flexner Report,” a Carnegie Foundation-funded evaluation of medical training institutions. The report stated Vanderbilt was best suited among Tennessee medical

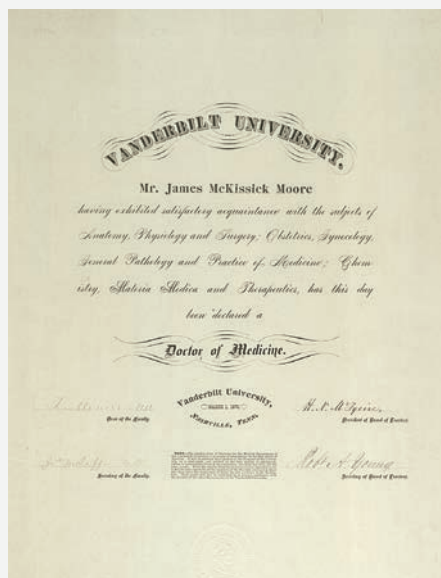
colleges to deliver a course of study. The report noted, however, that the school could use more laboratories, equipment and faculty.

The onset of World War I in 1914 meant medical school enrollment throughout the country declined significantly as faculty and students entered military service. The Student Army Training Corps was also established on campus, transforming Vanderbilt into a military post.

“I can only say that wherever one went in the service, one saw Vanderbilt men. On this side in every camp, at the port of debarkation, on the transports, on the firing line, in the hospitals, and even back in the quiet zones of the S.O.S., eating their hearts out to get up to the front,” said Lt. Col. W.D. Haggard in a February 1919 address to the Vanderbilt Club of Nashville.

The same year, spurred by the “Flexner Report,” Kirkland negotiated a \$4 million grant from the General Education Board, an organization supporting higher education and medical schools bankrolled by philanthropists.

The newly appointed Medical School Dean Canby Robinson, MD, decided the top priority should be relocating all training, laboratory and



BEGINNINGS

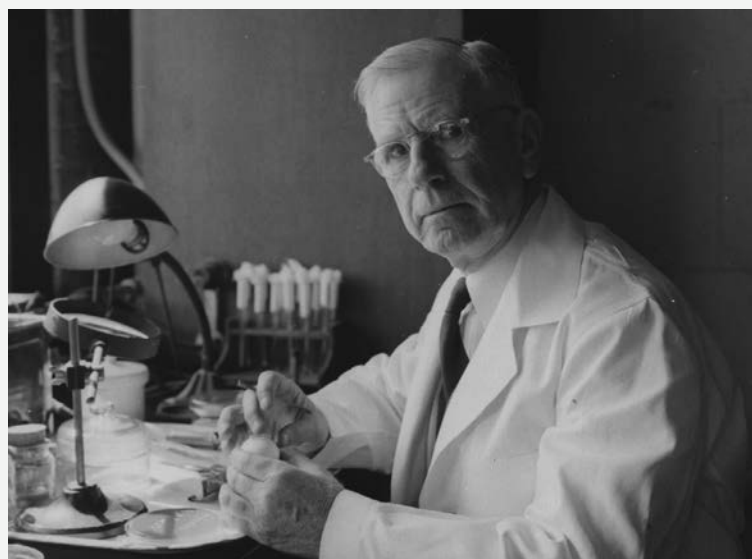
Clockwise, from upper left:

One of the first diplomas issued to a physician graduate of Vanderbilt University.

The original Fifth and Elm campus in 1915.

Aerial view of the VUMC campus, circa 1938.

The work of Vanderbilt pathologist Ernest Goodpasture, MD, revolutionized vaccine development.



patient care facilities to conjoin the Vanderbilt University campus. A remarkable amount of determination resulted in an additional \$3 million raised to fund the effort, an extraordinary feat in the postwar South.

A unified campus

Under Robinson's leadership, the medical school made the transformational relocation from downtown Nashville to what was then known as the West Campus along 21st Avenue. On Sept. 15, 1925, the facility housing the Medical School, Vanderbilt University Hospital (VUH), outpatient clinics, laboratory space and medical library opened. This building, including the ornate School of Medicine entry arch facing the current day John E. Chapman Quadrangle, remains at the heart of Medical Center North.

Robinson increased the number of full-time educators and clinical faculty, recruiting nationally known trailblazers to serve in leadership roles. He established three departments — medicine, surgery, and obstetrics and gynecology — as well as three specialized laboratories — physiological, infectious diseases and chemical.

In 1925, he recruited Barney Brooks, MD, from Washington University to be the first professor of Surgery and chair of the Department of Surgery. He wrote Brooks of his confidence: "I have not a shadow of a doubt regarding your fitness, ability and strength to do your full measure in getting the new school underway."¹

In a 1933 letter, Brooks praised the new facility: "I never fully realized the advantages of all activities of a university medical school being conducted within a single 'building' until I came to Nashville. I have stated a great many times that if Dr. Canby Robinson never made any other contribution than his planning of the Vanderbilt University School of Medicine, he could still be considered as one of the great contributors to medical education."²

Collaborations flourish

The cohesive campus was a catalyst for research and clinical collaborations that led to transformational advances in the provision of innovative, safe patient care throughout the country.

For example, Vanderbilt surgeon Alfred Blalock, MD, and his research and laboratory assistant Vivien Thomas conducted research that later led to the groundbreaking development of the Blalock-Thomas-Taussig shunt. This was used for infants born with the cardiac defect tetralogy of Fallot.

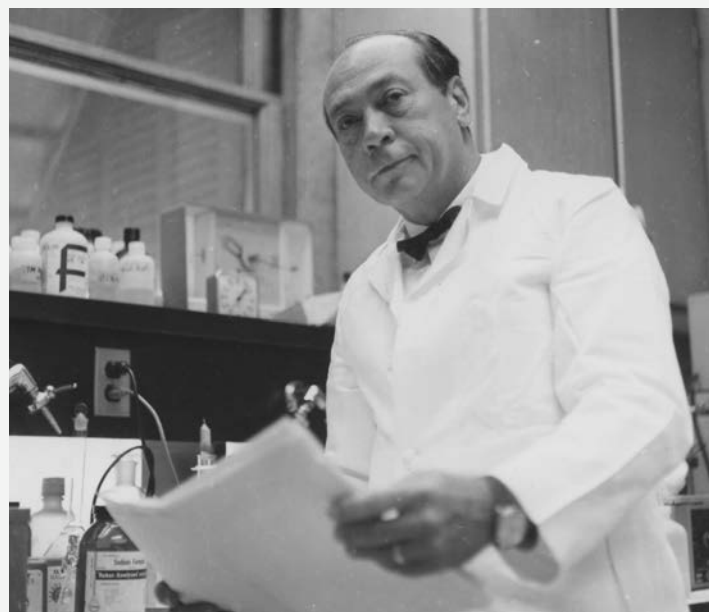
A process for culturing vaccines in chicken embryos and fertilized eggs was developed by Ernest William Goodpasture, MD, a Vanderbilt pathologist. His work, which began in the 1930s, revolutionized vaccine development.

In 1962, Mildred Stahlman, MD, professor of Pediatrics and Pathology, Microbiology and Immunology, established the nation's first newborn intensive care unit to use monitored respiratory therapy in babies born with damaged lungs at VUH.

Wartime contributions

Medical schools in the U.S. played a remarkable role during World War II, and VUSM was no exception. The draft pulled students and faculty to the battlefield, and more than 4,500 Vanderbilt University alumni were recorded as serving in every branch of service and theater of operation.

The demand for medical professionals to care for battlefield wounded and to provide domestic health care pushed Vanderbilt to



EARLY RESEARCH

Top: Vivien Thomas, surgical technician and researcher, working in the lab in 1930.

Middle: Earl Sutherland Jr., MD, won the Nobel Prize in 1971 for discoveries related to cyclic adenosine monophosphate.

Bottom: Biochemist Stanley Cohen, PhD, won the Nobel Prize in 1986 for research on cellular growth factors.

offer accelerated degrees year-round, often graduating multiple classes each year.

Growth of facilities and programs

The years immediately following World War II were a time for rebuilding. VUSM and VUMC achieved several facility expansions fueled by federal grants; an increased emphasis on advanced basic science research; and continuing clinical subspecialization.

In the 1960s through the 1980s, larger, more specialized spaces were needed for growing patient populations, advanced investigations, medical student education, and new and expanded clinical and academic departments. Many of the facilities on the Main Campus today were added during this period, including the Learned Laboratories, the Round Wing, the Joe and Howard Werthan Building and Rudolph A. Light Hall.

New hospitals and clinics

In 1970, the patients of the Junior League of Nashville Home for Crippled Children, established in the 1920s, had been transferred to Vanderbilt. After years of building support within the community and university, David Karzon, MD, later chair of the Department of Pediatrics, led efforts to establish the Children's Regional Medical Center, to be housed within VUH.

A new adult hospital, with space dedicated on three floors for pediatric patients, opened to great fanfare on the Main Campus in 1980. In 1985, the Psychiatric Hospital at Vanderbilt — initially for children and adolescents — was completed.

The Vanderbilt Clinic, an expansive space for outpatient specialty clinics, was opened in 1988, and new medical research buildings on the Main Campus were constructed in 1989 and 1994. In 1993, the Vanderbilt Stallworth Rehabilitation Hospital was dedicated, and in 1994 the Annette and Irwin Eskin Biomedical Library opened.

In 1999, local businessman and philanthropist Monroe Carell Jr. began a fundraising campaign for a new, freestanding children's hospital. In 2004, an eight-floor, 206-bed pediatric hospital, named in Carell's honor, opened. When the ongoing expansion is complete, Monroe Carell Jr. Children's Hospital at Vanderbilt will have 401 beds and more than 1 million square feet on the Main Campus, plus 30 off-site and affiliated locations.

In 2009, Vanderbilt Health began a steady expansion of outpatient, specialty clinics, and today there are more than 180 outpatient clinic locations and more than 400 specialty clinics.

VUMC has steadily grown to five regional campuses with seven hospitals — including three regional hospitals — and more than 1,700 licensed inpatient beds. The medical clinical staff has grown to exceed 4,900.

VUMC is now one of the largest health care systems in the Mid-South, and its extensive medical specialties and subspecialties provide abundant and unparalleled training opportunities for VUSM students.

New leadership

In October 2008, Jeff Balser, MD, PhD, then associate vice chancellor for Research for VUMC, was named VUSM's 11th dean. Balser was also named vice chancellor for Health Affairs in 2009. In 2016, he was named President and CEO of VUMC, while continuing to serve as dean.

For more than two decades, Balser, along with VUSM's and VUMC's leadership, has led the charge to bring personalized medicine from the research setting to the bedside, integrating advances in biomedical informatics, discovery science and precision genomics while training future generations of leaders in medicine.

Redefined medical training

Medical education at the School of Medicine underwent a seismic shift in 2013, with the creation of Curriculum 2.0, a first-of-its-kind academic model that transformed the traditional two-year preclinical program.

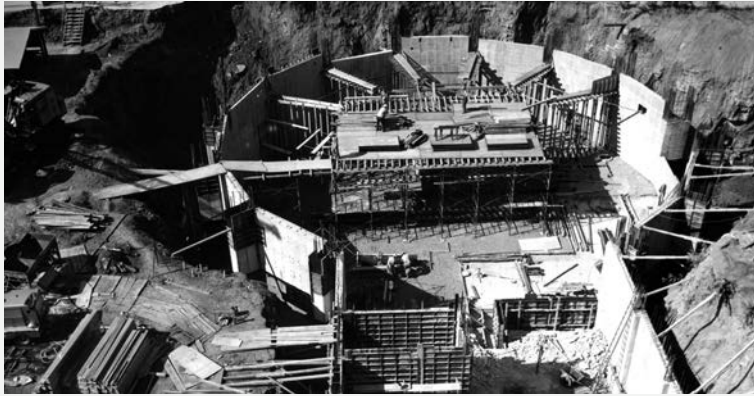
The model is composed of a 13-month preclinical curriculum; clerkship rotations in the second year; clinical experiences and electives based on career interests in the third and fourth years; and student research across four years. Medical schools around the country have followed Vanderbilt's lead and adopted Curriculum 2.0's structure.

To better support Curriculum 2.0, Eskin Biomedical Library underwent a \$12.9 million renovation and reopened in July 2018 as the Annette and Irwin Eskin Family Biomedical Library and Learning Center, creating a new learning home for medical students. The project was supported by a visionary \$6 million gift to Vanderbilt University from the Eskin family.

150 YEARS OF MILESTONES

1870s	1920s	1970s	1980s	
1874 Vanderbilt University School of Medicine (VUSM) opens.	1875 First class of 61 physicians graduates.	1925 VUSM relocates to 21st Avenue South.	1971 Pharmacologist/biochemist Earl Sutherland Jr., MD, wins Nobel Prize.	1978 Rudolph A. Light Hall and Langford Auditorium open.
			1980 New Vanderbilt University Hospital (VUH) opens.	1986 Biochemist Stanley Cohen, PhD, wins Nobel Prize.





ADVANCEMENTS

Clockwise from upper left: Construction in 1960 of what is now the Round Wing.

Ribbon cutting at the 2018 re-opening of Annette and Irwin Eskind Family Biomedical Library and Learning Center.

The 2004 opening of Monroe Carell Jr. Children's Hospital at Vanderbilt brought increased specialty training.

A medical student cares for a Shade Tree Clinic patient.

Delivering care to neighbors in need

In 2005, the Shade Tree Clinic, a community-based health clinic run by Vanderbilt medical and nursing students, was established to provide care to medically underserved Middle Tennessee residents. The clinic has grown from a walk-in clinic in a double-wide trailer to a comprehensive medical home for more than 400 patients.

Participating in the Shade Tree clinical experience offers medical and nursing students the unique opportunity to be responsible for a continuum of patients' needs while learning the fundamentals of health care delivery. The experience is rewarding for everyone involved

and represents the best of VUSM's mission to train future leaders in health care.

Building a legacy of distinction

Today, VUSM ranks among the nation's top National Institutes of Health grant recipients, with more than \$527.7 million in NIH grant funding. VUSM has an estimated \$900 million in total annual research awards supported by government, foundation and industry sponsors.

VUSM currently has 2,798 full-time faculty members. To date, 37 faculty members have been elected to the National Academy of Medicine;



1990s

1994
Annette and Irwin Eskind Biomedical Library opens.

2000s

2004
Monroe Carell Jr. Children's Hospital at Vanderbilt opens.

2003
For first time more women than men make up VUSM's first-year class.

2010s

2013
VUSM launches Curriculum 2.0.

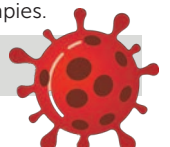


2016
VUMC and VU separate.

2018
Annette and Irwin Eskind Family Biomedical Library and Learning Center reopens after renovation.

2020s

2020
Vanderbilt researchers play key roles in developing and testing COVID-19 vaccines, antiviral drugs and monoclonal antibody therapies.



10 have been elected as members of the National Academy of Sciences; and one faculty member has been elected as a member of the National Academy of Engineering. Election to a national academy is one of the highest professional honors for scientists, engineers and health professionals.

The School of Medicine has a current enrollment of 392 students, with a composition of 52% female and 48% male. VUSM offers three doctoral degrees and eight master's degrees in specialties such as public health, medical physics and genetic counseling. A range of dual degree programs allows medical students to complete their Doctor of Medicine degree along with a graduate degree in another specialty to broaden their expertise and career path.

VUMC houses one of the nation's most distinguished graduate medical education programs with more than 1,200 residents and fellows training in more than 200 accredited specialties.

Of note, VUMC has led key discoveries delivering vaccines and treatments for COVID-19. It has leveraged its BioVU DNA resource to establish the Alliance for Genomic Discovery with nine pharma and biotech partners, creating the nation's largest whole-genome DNA repository linked to electronic health records for both academic and commercial use.

Recognized as the nation's academic leader in health information technology, the NIH Data and Research Support Center for the All of Us Research Program is based at VUMC. The All of Us Research Program is asking 1 million volunteers to share health and lifestyle information with the goal of accelerating research and medical breakthroughs.

Vanderbilt's Department of Biomedical Informatics (DBMI) is one of the largest academic departments of biomedical informatics in the country, with more than 140 faculty members and an exceptional graduate training program. DBMI's portfolio of research and development projects includes work in clinical, computational and translational informatics; bioinformatics; pharmacogenomics; systems biology; personalized medicine and more.

Many advancements developed at Vanderbilt, including an enterprise-wide electronic health record, clinical communication and decision support tools, and population-scale research resources, have been adopted by hospitals, health systems and research institutions across the nation.

Much more to come

Upon its sesquicentennial, it is easy to see how VUSM graduates have long been transformational ripples throughout the United States health care community and beyond. Ripples of innovation, excellence and compassion emanating from a single pebble drop, the awarding of the first medical degree by Vanderbilt University.

Here's to many more extraordinary milestones in the centuries ahead. ■

¹Communication to Brooks, July 24, 1925, Box III-27, History of Medicine Collections, Vanderbilt University.

²Communication to Arthur Kendall, Dec. 16, 1933, Box II-38, History of Medicine Collections, Vanderbilt University.

Protectors of the Past

Team preserves invaluable history of medicine

BY JILL CLENDENING + PHOTOGRAPHY BY DONN JONES

When Vanderbilt University archivist Jim Thweatt slips a massive tome from a shelf and gently opens its pages, it's as if a portal to the past has magically flung open and history cascades out.

The elaborately illustrated "De Humani Corporis Fabrica Libri Septem" ("On the Fabric of the Human Body in Seven Books") is one of the most historically significant works on human anatomy of all time.

First published in 1543 by Renaissance physician Andreas Vesalius, meticulous text on all that was known or believed about the human body, and detailed, cutaway illustrations of anatomy based on Vesalius' human dissections made the book a must-have reference for 16th century physicians throughout Europe.

Fewer than 400 copies of the book remain, and the one admired by Thweatt is part of the History of Medicine Collections and Archives housed at the Annette and Irwin Eskind Family Biomedical Library and Learning Center. It is a second edition, published in 1555, donated to the library by Crawford Adams, MD, a prominent Vanderbilt University Medical Center cardiologist and bibliophile.

It is just one of the approximately 15,000 volumes and books; 2,000 artifacts; and hundreds of manuscripts, photographs and other materials illuminating the story of medicine that make up the collections and archives preserved by Thweatt and curator Chris Ryland.

Preserving the history of medicine provides context about how treatments and diagnoses have evolved, records the contributions of key figures in medicine through the years, and potentially informs future advances in health care.

"Even today, in modern textbooks there will be vestiges from the distant past. It's less visible, but it's there," said Thweatt. "The primary concern has always been to heal and help people. It's very important, especially for students, to gain that perspective — that medicine is an evolving process. Here are the foundations, and you are part of that progression."

The most visible portion of the collections is found in a stately room lined with cherry bookcases stretching to the ceiling, with protective cases and cabinets sheltering the most fragile and rare treasures. Large tables give researchers room to work, and a cozy seating area is a favored escape for many noted faculty. During the 2017-2018 renovation of the library, the Eskind family specifically asked that this pleasant room not be touched.

The library's protective basement vault houses what Ryland

jokes are the “medium rare” collections, with a wealth of boxes packed with artifacts — think early surgical instruments, microscopes, syringes, beakers and stethoscopes — as well as shelves filled with documents. A back wall is hung with framed treasures such as composite photos of medical school graduates and faculty from the 1800s on and intricate medical illustrations meant to demystify various scourges and maladies.

Many more items are safely stored, awaiting sorting and cataloging to join the official collections. As alumni and others donate items, it seems Ryland’s and Thweatt’s jobs will be never-ending, which is a matter of great joy for them.

“I’ve been very lucky to do something like this that I love,” Ryland said. “I’m surrounded every day by all these books filled with voices from the past, and all of them have something important to offer us, often in ways we never expected.

“Plus, our visitors and researchers are all experts in their own areas, and what I learn from them I can use to help the next professor teaching a class, or the next scholar looking for that perfect source.”

These extraordinary collections, dating from around 1500, are open to all curious souls — researchers and students at VU, VUMC and the public — to view by appointment.

Ryland’s love of antiquities, particularly rare and antique books, was ignited when he moved to Nashville after graduating from Maryville College in East Tennessee. He landed a job at a book collectors’ mecca, Elder’s Bookstore, which opened in 1930. Ryland then got a job at Eskind Biomedical Library, which at that time was a part of the Medical Center.

This led to him attending the University of Tennessee, Knoxville, for a master’s degree in information sciences. After working in the corporate world for a bit, Ryland returned to Nashville, and he again was hired at Eskind Biomedical Library.

After expressing interest in archives and special collections, he began spending more time in this area. When Special Collections librarian Mary Teloh retired after 38 years, Ryland soon moved into the role of curator of the History of Medicine Collections and Archives.

In 2016, when VU and VUMC legally separated, Ryland and Thweatt became employees of Vanderbilt’s Jean and Alexander Heard Libraries. In 2024 the History of Medicine Collections formally became a part of the Vanderbilt Special Collections.

After graduating from Austin Peay State University with a degree in history and English, Thweatt came by his archivist role in a less traditional way. His father, John Thweatt, was an archivist at the Tennessee State Library and Archives in Nashville. The younger Thweatt has fond memories of his family spending time with his father as he worked in the archives on the weekend.

“It was such great fun, just seeing the researchers there doing research and finding things,” he said. “There were some interesting characters! I started attending archivist conferences with my father, and at one of the conferences I became aware of an open position here in 1992. I’ve been here ever since.”

A curated selection of the History of Medicine Collections’ photos, documents and artifacts can be viewed at the Annette and Irwin Eskind Family Biomedical Library and Learning Center in a



Top: Jim Thweatt, left, and Chris Ryland

Bottom: One treasure of the History of Medicine Collections and Archives is the famed “De Humani Corporis Fabrica Libri Septem.”

special exhibit, “United in Purpose: 150 Years of Medicine and Nursing at Vanderbilt.” The exhibit is in observance of the sesquicentennial of Vanderbilt University and its School of Medicine.

The History of Medicine Collections and Archives are a unit of Vanderbilt Special Collections and University Archives. The collections can be viewed by appointment only, 8 a.m.-5 p.m., Monday through Friday. Visit www.library.vanderbilt.edu/specialcollections/historyofmedicinecollections. ■





MINUTES SAVED MEAN LIVES SAVED

Forty years of LifeFlight transports equals a remarkable legacy

July 5, 1984, marked a major change in trauma care in Middle Tennessee as Vanderbilt University Medical Center launched the LifeFlight program. Before that date, people who were severely injured anywhere in the small towns, farmland and rolling hills of the region had to travel to Nashville by ground to access sophisticated, lifesaving trauma care.

At that time, there was no state-organized trauma system (that didn't come about until 1988), so which patients were selected for transport was not uniformly defined.

Co-founded by John A. Morris Jr., MD, professor of Surgery, and the late Joseph C. Ross, MD, associate vice chancellor emeritus for Health Affairs, the LifeFlight program began as a single helicopter air ambulance service four decades ago and has grown to a comprehensive emergency medical services provider that includes critical care air and ground transport; coverage for sports and entertainment events; and emergency and dispatch communications.

Shortly after the LifeFlight program began, a paramedic in rural Clay County, Tennessee, noted that the helicopter could get a badly injured patient to Nashville in

just 32 minutes, while a ground ambulance would take up to an hour and 45 minutes.

But more than that, because LifeFlight helicopters are essentially intensive care units that fly, staffed by some of the most knowledgeable trauma clinicians available, they are not just bringing the patient to the hospital, they are bringing the hospital to the patient.

Early days

Before the first flight could take off, years of dreaming and planning had to happen. The unglamorous work of obtaining permits, selecting a vendor for the aircraft, holding neighborhood meetings and securing governmental approval all had to take place.

The first helicopter — a Bell 206 LongRanger — had room for only one patient along with two flight nurses working elbow-to-elbow in the back and a pilot up front. A helicopter large enough to carry two patients at a time along with the crew — a twin-engine BK-117 — was added in 1986.

LifeFlight's first helipad was on the south end of the Vanderbilt University Hospital Plaza, sitting approximately where the facility's Courtyard Café is now. The Vanderbilt Clinic (TVC), where many outpatient clinics are housed on the Main Campus, hadn't yet been built.

REPORTING BY CRAIG BOERNER, KATHY RIVERS, HOLLY FLETCHER, ERIN O. SMITH, WAYNE WOOD
PHOTOGRAPH BY ANNE RAYNER

For a few months, as TVC construction began in 1985, flights landed at a nearby Vanderbilt University athletic field. Patients were then unloaded and transported the final few blocks by a waiting ambulance — LifeFlight's first dedicated ground transport.

The construction of TVC brought with it the addition of a fourth-floor rooftop twin helipad, which opened for flights in late 1985. The helipad included a dedicated elevator direct to the emergency department.

In November 1991, Vanderbilt received a new BK-117 helicopter with the medical compartment's interior custom designed by Vanderbilt flight nurses to achieve the best functionality. In April 1992, LifeFlight saw the first month of a remarkable 100 patient transports, and in the summer of 1993, the service experienced three consecutive months of more than 100 patient transports each month.

Demand leads to expansion

An ever-increasing demand for rapid transport to deliver trauma and critically ill patients to the Medical Center meant more aircraft were needed. In 1997, LifeFlight expanded operations by adding a second helicopter, LifeFlight 2, along with additional staff, including six flight nurses, five pilots, four flight coordinators and one mechanic.

To support the growing operation, the LifeFlight Skyport located on the roof of VUH was opened in 2000, with a helipad communications center and the program's administrative offices. The communications center in the Skyport is staffed continually by EMTs or paramedics who expertly coordinate all patient transports.

As the number of flights grew, VUMC's clinical programs responded by growing to meet the needs of the region's trauma victims. This meant upgrading the emergency department, adding to the trauma service and eventually establishing the Department of Emergency Medicine in 1992. In 1998 the dedicated Trauma Intensive Care Unit was opened in VUH.

That same year a pediatric emergency department was added on the first floor of TVC, just across the ambulance driveway from the main VUMC emergency department. This meant that for the first time, sick and injured children in the region could receive emergency medical treatment in a separate, child-oriented environment.

Beginning in 2000, LifeFlight 2 was based at Bedford County General Hospital. This was the first of the program's bases to be located away from the Main Campus in Nashville. Just two years later, a third LifeFlight helicopter was added at the then Gateway Medical Center in Clarksville, Tennessee.

In May 2003, a LifeFlight "hot line" yellow phone system was implemented to provide emergency medical services (EMS) agencies and hospitals throughout Middle Tennessee and southern Kentucky a direct connection to Flight Communications.

Another remarkable year for expansion of LifeFlight was 2004 as three new helicopters — American Eurocopter EC-145s — were added. They were based in Lebanon, Clarksville and Shelbyville. LifeFlight became the first hospital-based air ambulance program in North America to utilize the EC-145, then recognized as one of the safest, state-of-the-art helicopters on the market.

That same year, fixed wing transport was added to the LifeFlight program, with a flight crew available seven days a week to transport patients over a longer range. Today, LifeFlight's Fixed Wing division transports neonatal, pediatric and adult patients, as well as high-risk obstetrics, multisystem trauma and burn patients, and organ transplant

recipients. The program also performs repatriation flights to transport patients back to their home to continue medical care.

The fixed wing aircraft is equipped with a multifunction ventilator, cardiac monitors, medical oxygen, compressed medical air, IV pumps and medications. The Fixed Wing division can transport patients with a ventricular assist device, with a VUMC cardiac perfusionist accompanying the flight team.

And the Growth Continues

The LifeFlight Event Medicine division was added in 2008 when VUMC became the official health care provider of the Nashville Predators hockey team. LifeFlight Event Medicine provides EMT and paramedic-level EMS for team members and spectators at all home hockey games. In addition, LifeFlight Event Medicine currently provides EMS coverage, including ambulance standby, for all Bridgestone Arena events, Vanderbilt University sports games, Nashville Sounds Baseball and special events such as area festivals.

Top: A crew prepares a twin engine helicopter for a flight in 1986.

Bottom: LifeFlight helicopter flies over the Vanderbilt University Medical Center campus in the mid-1980s.

Photos courtesy of VUMC News & Communications

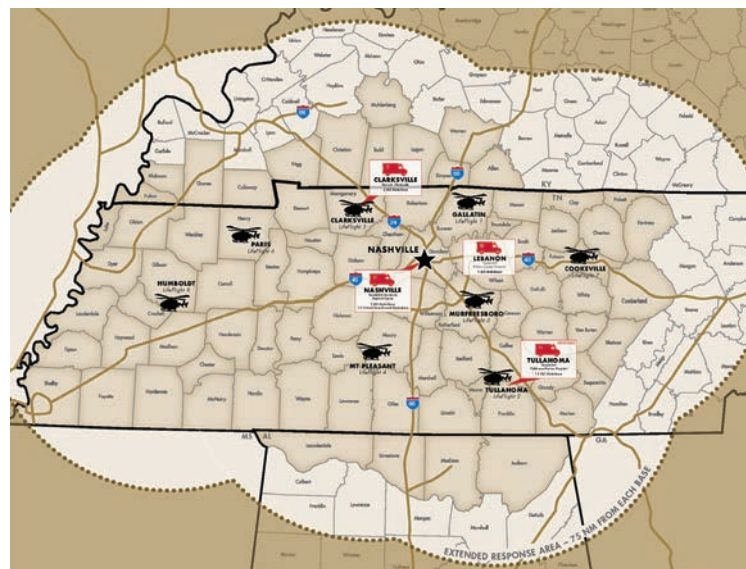


LifeFlight staff in easily spotted Event Medicine uniforms and emergency transport vehicles are ready to care for the injured or ill are now a common sight whenever crowds gather for fun. More than 14,000 entertainment, sporting and community events have been staffed by the Event Medicine crew, who have treated more than 600 patients on-site and completed more than 800 transports.

LifeFlight Ground EMS was added in 2011, and the entire fleet now includes nine helicopters, one airplane, 28 advanced life support ground ambulances and four critical care ambulances. Additional air and ground bases outside of Nashville have been established throughout LifeFlight's coverage area in Clarksville, Cookeville, Gallatin, Humboldt, Lebanon, Mt. Pleasant, Murfreesboro, Paris and Tullahoma. The coverage area includes Middle Tennessee, parts of West and East Tennessee, southern Kentucky and northern Alabama. These air and ground bases in communities help providers reach critically injured patients even more quickly.

Today, LifeFlight operates two communications centers that are instrumental in efficiently coordinating patient care and transportation services. One center triages three helipads, provides air advisories to flight crews, and offers rapid response support to VUMC's four Main Campus hospitals — Vanderbilt University Hospital, Monroe Carell Jr. Children's Hospital at Vanderbilt, Vanderbilt Psychiatric Hospital and Vanderbilt Stallworth Rehabilitation Hospital.

The other communications center was established in 2018 to provide around-the-clock transportation coordination for the entire Vanderbilt Health system, including the Regional Hospitals — Vanderbilt Wilson County Hospital, Vanderbilt Bedford Hospital and Vanderbilt Tullahoma-Harton Hospital.



Shaded counties indicate immediate response area for LifeFlight's helicopters. Extended response area is 75 nautical miles from each base.

Vanderbilt LifeFlight's distinctive gold, black and white transport vehicles have become a comforting presence in Tennessee. When the winged crest is spotted, the crew's mission is clear.

And the impact of the LifeFlight program, now spanning four decades, is illustrated by a truly remarkable measure: mothers, fathers, brothers, sisters, wives, husbands, children and grandparents — alive. ■

VOICES MARK LIFEFLIGHT'S ANNIVERSARY

“

For four decades Vanderbilt LifeFlight has undergone remarkable growth and has been an important pillar of the emergency and trauma services we provide Tennesseans. The program's more than 77,000 successful flights and 37,000 ground transports have resulted in countless lives saved. We are grateful for the program's visionary founders and for each of the physicians, nurses, emergency medical technicians, pilots, mechanics and other personnel who have served with distinction over the years.”

— C. Wright Pinson, MBA, MD, Deputy Chief Executive Officer and Chief Health System Officer for VUMC

“I was incredibly fortunate to be a part of that incredible team as both a clinician and a leader during a significant time in the program's beginning and growth. Being a part of the transition of Vanderbilt LifeFlight from one aircraft to a world-class comprehensive emergency medical services provider was an honor and a privilege.”

— Vanderbilt Wilson County Hospital Chief Nursing Officer Jeanne Yeatman, MBA, BSN

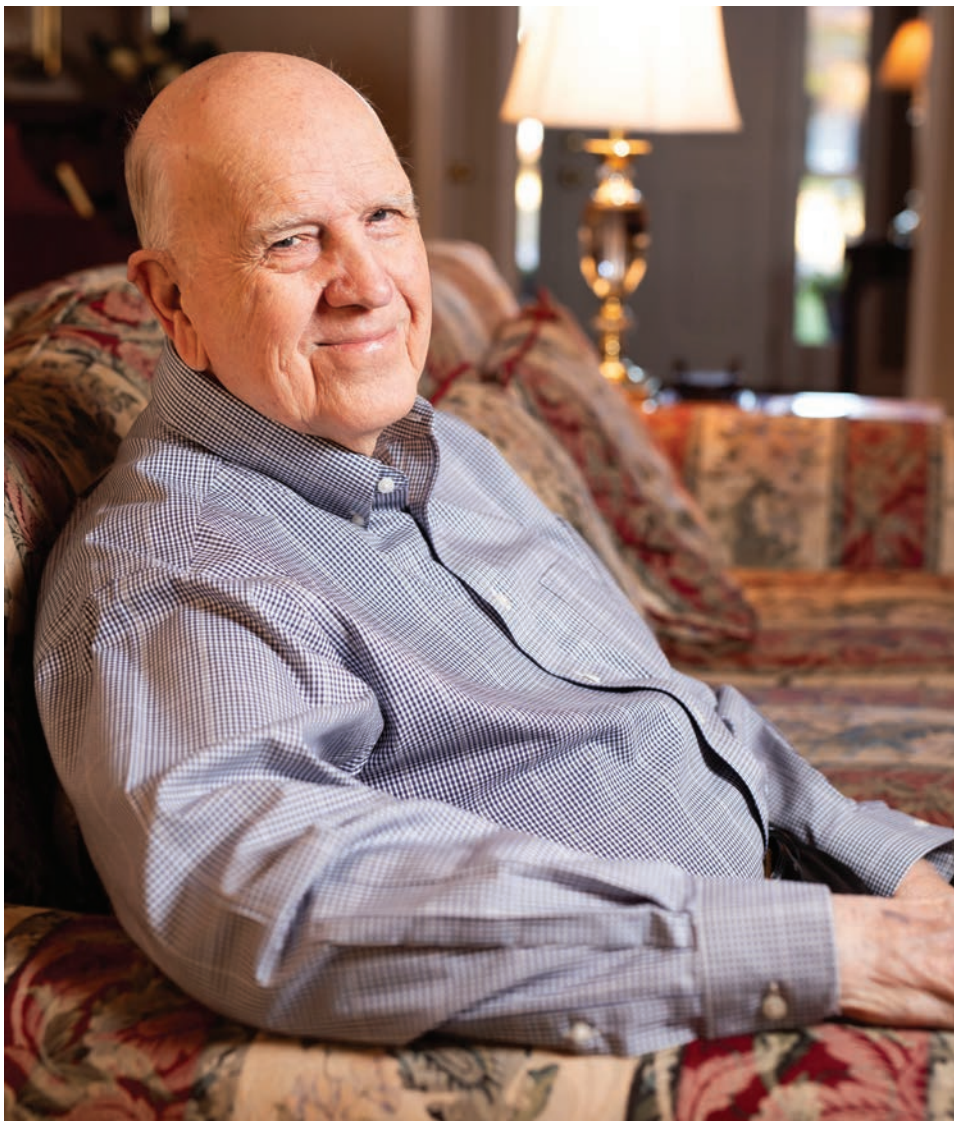
“This significant milestone is a testament to the unwavering dedication and tireless efforts in providing critical care transport services to our community. Vanderbilt LifeFlight has set the standard for excellence in patient care, innovation and professionalism. The team's hard work, compassion and commitment to saving lives have made a lasting impact on countless individuals and families in their time of need.”

— Lee Ann Liska, MBA, President and Chief Operating Officer of Vanderbilt University Hospital

“

Our dedicated teams are ready to provide the best emergency care and medical transportation around the clock. The team's tremendous skill and logistical prowess have established LifeFlight as a bedrock of our community. We are proud to serve as a critical part of the medical infrastructure in Middle Tennessee and beyond.”

— Stephan Russ, MD, MPH, executive medical director of Emergency Medicine and associate chief of staff for Vanderbilt University Hospital



THE MAN WHO GAVE ANGEL 1 ITS WINGS

Dean Driver's work delivered babies to care

BY [DANNY BONVISSUTO](#) + PHOTOGRAPH BY SUSAN URMY

In 1954, shortly after he completed his year of ground control radar training at Keesler Air Force Base in Biloxi, Mississippi, Curtis “Dean” Driver was transferred to Châteauroux, France: It was his first assignment, and he’d never been on a site with working instruments.

Two weeks later, he was unexpectedly promoted to station chief, which meant maintaining the whole radar site.

Driver was surprised but not overwhelmed. He trusted himself to figure it out, and he did.

Driver didn’t plan to spend his career in ground control radar: He took radio and TV engineering courses through the Air Force training program, and when he finished his tour and returned to Nashville, the Tennessee native enrolled in a two-year course at Mid-South

Electronics with a plan to be a chief engineer at a radio and TV conglomerate.

One of his teachers, Tom Arnold, asked if he’d be interested in the medical side of electronics instead and offered him a position as a support medical electronic technician in Vanderbilt University’s Department of Medicine. Driver accepted and started in 1959.

Together with Arnold and another employee, Driver helped develop catheterization systems and the first large-screen TVs used for medicine. Driver’s responsibilities grew quickly from the Department of Medicine to include other departments within Vanderbilt University Medical Center’s campus.

He was the director of Biomedical Engineering the day Mildred Stahlman, MD, professor of Pediatrics and Pathology, Microbiology and Immunology who established at Vanderbilt the nation’s first neonatal intensive care unit, mentioned in a meeting that she was having a hard time finding someone to build a pediatric transport system.

“I told her, ‘I’ll throw my hat in the ring to build it for you if you’re interested.’ When she got her jaw up off the floor she said, ‘Can you do that?’ And I said, ‘Sure, I can do that,’” said Driver, who had never done anything like this project. “She and Dr. Angela Skelton had gone round and round trying to find someone, and it tickled them to death that someone close by could make it happen. One day she called and said, ‘Start building.’”

At the time, the NICU lost a tremendous number of premature babies due to hyaline membrane disease, also known as respiratory distress syndrome, a condition that occurs due to a lack of surfactant, a substance made by the lungs around 26 weeks of pregnancy. It keeps the airways open and allows babies to breathe after delivery. Medical providers needed to be able to get to these infants quickly and administer oxygen or perform emergency surgery on the way to the hospital — and ambulances outfitted for neonatal patients didn’t exist at the time.

“I started drawing it out with Dr. Stahlman,” said Driver. “She and I worked really well together, and she helped me with some of the medical applications.”

Driver bought a new panel truck, also called a step van, from Jim Reed Chevrolet in Nashville and had the auto dealer reinforce the suspension so it could handle the weight of the machines and equipment he planned to install. This vehicle has often been referred to as a converted bread truck over the years, but Driver said that’s not the case.

“People call it a bread truck, but it was a

brand-new panel truck,” he said. “It looked like a bread truck, but it wasn’t.”

Though it was mobile, the truck had to serve as a stationary hospital with areas for a surgeon and at least two nurses to work and sit. It needed incubators, a surgical space, places to store gases to power machines plus a hot and cold water supply and sewage system, supply storage and a generator — all within an extremely limited space.

The project was considered outside the scope of Driver’s job, so he parked the van at his house and worked on it in his driveway after hours and on weekends.

“I felt the need was important enough to invest the time,” he said.

When it was time for detailing and touch-up work, Driver reached out to Haynes Sloan, a friend and local sign shop owner who had done work for him on other projects. That’s when Driver had an idea that would affect a fleet of Vanderbilt pediatric transports for decades to come.

“In the process of figuring out what to put on the side of the van, it came to me that it ought to be called Angel 1. How much closer to an angel can you get than a little bitty baby struggling for life?” Driver said. “I took my idea to Haynes, and he drew what he thought was the outline of an angel. We made a few modifications and, lo and behold, there was an angel beside the words Angel 1 above the passenger door. The Lord gets the glory for the angel, not me.”

The blessings continued. While he was in the final stages of preparing Angel 1, which took its first ride in August 1974, Driver learned that the pediatric transport project had received a grant from the State of Tennessee to purchase a two-way radio that tied in to the same frequency as the Vanderbilt medical ambulance system.

Though the first pediatric transport in the region undoubtedly changed the lives of countless families for the better, Driver, who is now 91, heard a story that confirmed its importance years after he left Vanderbilt in 1979.

“My first wife died of cancer, and my second wife, who I’m still married to now, had a baby around the same time as a friend of hers,” he remembered. “That friend’s baby was sick, and the neonatal van at Vanderbilt went up to Sumner County Hospital in Gallatin and brought it back to Vanderbilt,” Driver said. “Unfortunately, the baby was lost, but it was nice that it had every chance it could.” ■

*“How much closer
to an angel can you get
than a little bitty baby
struggling for life?”*

*Dean Driver, 91, designer of VUMC’s
first neonatal transport*

‘Angel’ transport celebrates 50 years of giving critically ill children a fighting chance

For five decades, the Neonatal and Pediatric Transport team at Monroe Carell Jr. Children’s Hospital at Vanderbilt has provided safe and specialized emergency transport, 24 hours a day, for critically ill children and newborns.

Primarily serving Tennessee, southern and western Kentucky and north Alabama, highly trained care teams transport children from birth to age 21 in what essentially is a mobile intensive care unit. Monroe Carell is the only transport team in Tennessee that is certified by the Commission on Accreditation of Medical Transport Systems.

During a celebration held in August 2024, the transport team commemorated 50 years, more than 20,000 transports, and more than 5 million miles.

“What a special milestone for our Neonatal and Pediatric Transport program, sometimes affectionately known as the ‘Angel’ team,” said Meg Rush, MD, MMHC, President of Monroe Carell. “This has been a year to truly reminisce about this program not only because of this milestone but also the founders of the program who both passed away this summer: Dr. Mildred Stahlman and Dr. Angela Skelton. I am so proud of and grateful to the teams who do this care, taking our hospital expertise on the road. Countless lives have been impacted because of our ‘Angel’ team.”

The Neonatal and Pediatric Transport team consists of 50 crew members — two day-shift teams, a mid-shift team, and two night-shift teams — who make up to five calls during a 12-hour shift. The program averages about 2,000 transports annually, with about 188 a month.

“We’re prepared for all scenarios and run off protocols that are implemented as soon as we make patient contact,” said Rachel Harvill, who has been a respiratory therapist for the transport team for seven years. “We’re bringing Vanderbilt-level care to the patient in the community.”

The team currently has six ambulances in its fleet that travel by ground within 250 miles. Each is outfitted with an isolette/incubator or stretcher, a ventilator, humidified high-flow nasal cannula, a cardiac monitor and additional medical equipment and supplies to care for the hospital’s specialized patient populations.

“Once we arrive at a hospital, we usually see a sigh of relief and gratitude, and the same for us in that we’re there and able to help because a lot of these small community hospitals are doing the best they can with the resources they have,” Harvill said.

Angel 7, with ECMO technology, joined the fleet in 2023.



ERIN O. SMITH



HOW FAST CAN HE RUN

THE TRANSFORMATIVE IMPACT OF PEDIATRIC GENE THERAPY

Six-year-old José Capablanca was excited to see his visitors.

"I think you guys want to know how fast I can run!" he shouted, as he gleefully raced around the living room and kitchen of his family's home in Gallatin, Tennessee.

José has Duchenne muscular dystrophy (DMD), a rare genetic disorder that affects mainly boys, and which is characterized by progressive muscle weakness, disability and premature death. He also is the fourth patient at Monroe Carell Jr. Children's Hospital at Vanderbilt to receive a genetic therapy that has transformed his life.

BY **BILL SNYDER** + PHOTOGRAPH BY **DONN JONES**



José Capablanca, 6, is able to play baseball today because of the gene therapy treatment he received at Monroe Carell.



The treatment, called Elevidys, is a single intravenous infusion of millions of gene-bearing viral particles that target skeletal muscle cells throughout the body. Upon receiving their genetic instructions, the cells start making part of a protein called dystrophin that is essential for normal muscle function, and which children with DMD lack.

“It’s not a cure but the next step,” said Jonathan Soslow, MD, MSCI, professor of Pediatrics and director of Pediatric Cardiac Imaging Research. “The hope this treatment brings is incredible — the idea or chance that this can alter the progression of the disease and make a child’s life better.”

“In the younger age group, there’s definitely a clear benefit,” added W. Bryan Burnette, MD, professor of Clinical Pediatrics and interim director of the Division of Pediatric Neurology. “But we don’t know what it’ll look like in 10 or 15 years.”

Burnette and Soslow, who holds the Dr. William R. Long Directorship in Pediatric Research at Vanderbilt University Medical Center, co-lead Monroe Carell’s Pediatric Gene Therapy Workgroup. Their team began offering Elevidys to DMD patients in late 2023, after initial approval by the Food and Drug Administration (FDA).

José received his infusion on June 18, 2024. Prior to treatment, “he had this very wobbly, unsteady gait, like an old man trying to walk,” said nurse practitioner and workgroup member Serena Neumann, MSN, FNP-BC.

“When I get my medicine,” he told Neumann, “I’m going to be big and strong like my dad,” after whom he is named. Within weeks, his movements had become more fluid and coordinated.

“I’m Superman now!” he declared. “I can do anything!”

José’s parents are cautiously optimistic. While the treatment’s long-term effects are unknown, they have no regrets about choosing this chance for him.

José and Stephanie Capablanca praised Monroe Carell’s “awesome” team of health care professionals who made it possible for their son to receive the therapy and who continue to monitor his progress.

“They gave him the ability to be a little boy,” his father said, as he wiped a tear from his eye.

Offering complex gene therapies at Monroe Carell requires extensive coordination across multiple teams including clinical providers, pharmacy, revenue cycle, finance and managed care contracting. Shown here are members of the Pediatric Gene Therapy Workgroup.



ERIN O. SMITH

Decades of progress

VUMC has been investigating ways to improve outcomes for DMD patients for decades — long before 1986, when the genetic abnormality that causes the disease was identified.

Gerald Fenichel, MD, professor emeritus of Neurology and Pediatrics at VUMC and founding chair of the Department of Neurology, helped pioneer the management of DMD, trained a generation of clinical researchers, and was a member of the collaborative group that established the efficacy of corticosteroids in slowing disease progression.

“He was a huge influence on my career path,” said Burnette, who graduated from Vanderbilt University School of Medicine in 2001.

When Burnette joined the Vanderbilt faculty in 2007 following his clinical training, there were no FDA-approved therapies for DMD or for another rare and rapidly progressive neuromuscular disease, spinal muscular atrophy (SMA). Until recently, most children with SMA died in infancy from respiratory failure.

SMA is caused by a missing or nonworking gene that normally produces a protein critical for the function and survival of motor nerve cells in the spinal cord. Within two decades of its discovery in the mid-1990s, methods had been developed to repair the defective SMN1 gene or replace it entirely.

Monroe Carell began providing the first in a series of genetic therapies to newborns with SMA in 2016 and currently offers Zolgensma, a gene replacement therapy approved by the FDA in 2019.

“Children who a decade ago would have passed away before their 1st birthday are [today] essentially having normal motor development,” Burnette said. “They’re running, jumping, climbing stairs — doing things that healthy kids do.”

“In this population, it’s abundantly clear that the capacity to intervene at the earliest possible stage is having a tremendous impact,” he continued. “It’s probably been seven years since a patient of mine with SMA has passed away.”

Then came Elevidys.

Monroe Carell was a natural fit to offer the new therapy. Its multidisciplinary DMD Clinic, which is co-directed by Burnette, Soslow and pediatric pulmonologist Andrew Sokolow, MD, associate professor of Clinical Pediatrics, is the region’s largest such clinic, drawing patients from throughout the Southeast.

Opening the floodgates

Named for the French physician who first described the condition in 1868, DMD is now known to be caused by genetic mutations that prevent the body from producing adequate amounts of an essential protein called dystrophin.

Dystrophin acts like a molecular “shock absorber” to maintain fiber strength, flexibility and stability in skeletal muscles, including the heart muscle and diaphragm. Without it, every movement causes injury to muscle tissues, leading to irreversible loss of muscle function.

Children with DMD have difficulty walking, climbing stairs and rising from a seated position without assistance. By their early teens, they may require the use of a wheelchair. Despite advanced cardiac and respiratory care, including ventilatory support, few live into their 30s.

In the past 15 years or so, scientists have figured out how to treat rare genetic diseases by packaging corrective genes into harmless adeno-associated viruses (AAVs) and tagging the viruses so they target and unload their genetic cargo into specific nerve or muscle cells.

This is how Zolgensma works. But in the case of DMD, the affected gene is so large that it won’t fit into the AAV vector. Researchers

solved this problem by designing a smaller gene that encodes the most important part of the dystrophin protein, a “microdystrophin.”

Much of the early work on gene therapy for DMD was done at Nationwide Children’s Hospital in Columbus, Ohio, under the direction of Jerry Mendell, MD.

Mendell helped pioneer the testing and development of various therapies for DMD, including corticosteroids. He was the first to perform gene therapy for DMD, and he worked with Sarepta Therapeutics, a biopharmaceutical company based in Cambridge, Massachusetts, to develop what would become Elevidys.

The FDA initially approved the drug in June 2023 for ambulatory 4- and 5-year-old patients with a confirmed DMD gene mutation. A year later, the agency expanded the indication to include both ambulatory and nonambulatory patients 4 years old and older. This opened the floodgates.

“We went from having 12 to 15 patients who might be eligible for the treatment to 120 overnight — a tenfold increase in the number of potentially eligible patients,” Burnette said about the impact at Monroe Carell.

By the end of October 2024, six children had received Elevidys at Monroe Carell. A dozen more are in the pipeline. “We’re looking to treat two patients a month,” he said.

One boy’s story

When José was diagnosed with DMD in May 2021, the Capablancas were living in the Miami area with their extended Cuban American families. His great-great-granduncle was the Cuban chess prodigy José Raúl Capablanca, who held the World Chess Championship from 1921 to 1927.

José’s diagnosis, confirmed shortly before his 3rd birthday, was devastating. But it was not a total surprise because his mother is a carrier.

DMD is an X-linked disorder that occurs in 1 of every 3,000 to 5,000 male births.

A woman who carries a gene abnormality associated with DMD on one of her two X chromosomes won’t develop the disease. But since boys inherit one maternal X chromosome (and a paternal Y chromosome), there is a 50/50 chance she’ll pass the mutated gene — and DMD — to her son.

Soon after the diagnosis, José’s physical therapist, Terry Klein, told his parents about a gene therapy for DMD being tested at Nationwide Children’s Hospital in Columbus, Ohio.

While searching online for a pediatric neurologist, they came across Burnette and the DMD Clinic at Monroe Carell.

The Capablancas had lived in Middle Tennessee before. They liked the area, and in October 2021 they moved to Gallatin, 30 miles north of Nashville, with 3-year-old José and his baby sister, Daniella, to be closer to the therapy, whenever it became available.

After testing confirmed he had the mutation that qualified him for the new therapy, José was put on the waiting list. His father’s employer-provided health insurance covered the cost, which for gene therapy can run into the millions of dollars.

Within days after the FDA expanded its approval of Elevidys, José received the treatment. Only one dose is given because the body’s immune system becomes primed to recognize and attack any subsequent infusions of the virus vector.

For two weeks, José endured daily bouts of nausea and vomiting, common side effects of the treatment. But he was a trouper, his mother said. Each time he’d rinse out his mouth and say, “I’m gonna eat now.”



ERIN O. SMITH

The Capablancas moved back to Tennessee to be closer to the team that could deliver gene therapy for their son’s Duchenne muscular dystrophy.

To screen for possible adverse treatment effects on his organs, including his heart and liver, for the first three months José had weekly blood draws and other testing. Eventually the frequency of his appointments will be reduced to once every six to 12 months.

“He has such a positive attitude,” marveled Neumann. “He’s so resilient ... and tough.”

Just the beginning

Burnette is amazed at the accelerating pace of new genetic therapies, not only for neuromuscular disorders but for hematologic, metabolic and other diseases that present during childhood. “That’s the world we inhabit now, a completely different universe than it was a decade ago,” he said. “It’s dizzying.”

To offer Elevidys to patients, Monroe Carell had to marshal an extraordinarily broad array of resources and assemble a team of more than 40 specialists, including pediatric cardiologists, neurologists and pulmonologists, pharmacists, nurse managers and nurse practitioners, lab technicians and hospital administrators.

“It’s basically like having an organ transplant,” Burnette said. “It’s almost that level of posttreatment monitoring.”

Burnette credited Monroe Carell’s leadership, including hospital President Meg Rush, MD, MMHC, “for recognizing early that this was going to be important and would probably have a huge impact on how we deliver care, and for recognizing the value to the community of having a program like this.”

He and Soslow are optimistic that the eight-room Pediatric Clinical Research Unit, which is scheduled to open at Monroe Carell this spring, will enable the program to expand its participation in gene therapy clinical trials.

“This is just the beginning,” Burnette said. As the next gene therapies for childhood diseases inch closer toward approval, “we’ve just started marching up the hill.” ■



THE OBSTACLE IS THE WAY

Ultramarathon helps this master of monoclonal antibodies find balance

BY BILL SNYDER + PHOTOGRAPHY SUBMITTED BY JAMES CROWE JR., MD AND RACINGTHEPLANET

In late June 2024 James Crowe Jr., MD, began a grueling, seven-day, 155-mile ultramarathon through the Gobi Desert of Central Mongolia.

It was one of several physical challenges undertaken that year by Crowe, 63, whose lab at Vanderbilt University Medical Center has attracted international attention for developing monoclonal antibodies against a host of viral diseases, including COVID-19.

Six months earlier, and just 10 days after undergoing surgery to repair a torn meniscus in his left knee, he and his wife, Lisa Crowe, MD, a writer and retired Nashville physician, hiked an 85-mile circuit in Patagonia, Chile. In April he ran the Boston Marathon.

For Crowe, these are more than physical tests of endurance and achievement. They're about finding balance and living in the present. They also come at a time of big change for his lab, and for the Vanderbilt Center for Antibody Therapeutics (VCAT), which he directs.

In the summer of 2024, the center joined an extraordinary national effort to develop and

stockpile new vaccines and antibody therapies that can be deployed rapidly to prevent another pandemic.

"We are launching a new, three- to five-year cycle of large-scale, rapid antibody discovery efforts," Crowe said. "With over \$100 million in new extramural support, we are committed to advancing our work in developing monoclonal antibodies for even more viruses."

One of their targets is mpox, the virus formerly known as monkeypox, which is surging in parts of Africa. Crowe and his colleagues are working with the federal government and industry partners to advance mpox antibodies they isolated eight years ago into human trials.

"It feels good," Crowe said. "We had been talking about a proactive program for a very long time. We have gotten large grants to make antibodies very rapidly, and we're probably the fastest in the world."

The Gobi March draws runners from all over the world. They come to Mongolia to test their mettle against the vast steppes, sand dunes, river crossings and great rock valleys of

this sparsely populated country sandwiched between Russia and China.

On June 20, 2024, Crowe arrived in Ulaanbaatar, Mongolia's capital, but without his luggage. "I spent two days walking around Ulaanbaatar trying to cobble together the things I needed, which was especially exciting because there was a snowstorm all day Thursday," he posted to his blog on the sponsor's website, www.racingtheplanet.com.

Among the 40 or so items required of every racer were hiking and running gear, a puffy jacket and a rain poncho to keep out the cold and wet, and seven days' worth of food.

The ultramarathon began on Sunday, June 23, with a 21-mile jaunt through the rolling grasslands of the Orkhon Valley. "Wake at 2 a.m.," Crowe wrote. "Stand outside the tent with a full moon shining silvery light on a quiet camp, pitched at the base of 1,000-year-old ruins of the palace of one of Genghis Khan's generals."

"Ten miles in, we'd come upon a yurt (traditional tent home), with beautiful children in

traditional dress waving kindly as we pass. A few minutes later, 50 horses would charge by on the ridge above, running wild and free ... The steppes would be littered with the skeletons and skins of animals, ... giving motivation to keep moving."

Crowe is the Ann Scott Carell Professor and professor of Pediatrics and Pathology, Microbiology and Immunology in the Vanderbilt University School of Medicine.

He and his colleagues have developed cutting-edge technologies to identify and study clones of white blood cells producing specific, antiviral antibodies. They have identified human monoclonal antibodies against a host of pathogenic viruses, including Zika, Rift Valley fever, HIV, dengue, influenza and parainfluenza, Ebola, chikungunya, West Nile, norovirus, rotavirus and RSV.

Through their pioneering work in computational immunology, they have achieved major advances in the rational design of vaccines and antibody therapies, some of which have progressed to clinical trials and treatments.

In 2021 their groundbreaking work led to development of an injectable, long-acting antibody combination approved to prevent COVID-19 in high-risk patients. In June 2024, VUMC launched a clinical trial of another antibody they isolated targeting enterovirus D68, which is linked to a rare but devastating polio-like illness in children. And in October 2024, an antibody they'd isolated in 2012 that neutralizes the deadly hemorrhagic Marburg virus was sent for use in Rwanda, where at least 15 people had died during an outbreak.

"The desire to make a difference never goes away. I realize we can't fix everything ... but I do dream that after we've done our work, more people will live, ... more children will survive to adulthood. If we contribute in small ways to that, I'll be very happy."

— James Crowe Jr., MD



DONN JONES

A native Nashvillian whose grandfather was a Baptist minister and whose father, at 83, is still working as a radiologist, Crowe approaches his work and career with an intensity and sense of purpose that could easily become all-consuming. Yet there also is a joyful serenity about this youthful looking man with a boyish smile and sense of fun that belies the Olympian pace required to sustain his lab's prodigious research output.

Sand. Rocks. Sky. That's how Crowe began his summary of the third, 24-mile stage of the Gobi March on June 25.

"Amazingly we came upon a monastery, with various religious stone elements, and we each entered the temple there, which is active and replete with beautiful textiles, and skylight filtering from above. Incense was burning ... Several of the adherents were on the grounds in traditional robes, smiling and blessing us along the way ...

"I have been learning over the last few years that every moment can be holy ... and every place can be holy ... Still, to be in the Gobi Desert, in a verdant valley in the midst of vast dryness, at a monastery and temple, to be fully embodied and my mind turned off a bit, I just felt acutely aware of the transcendent nature of things ... the way things really are through immanent beauty, peace, silence, Nature."

Then came the sand dunes. "The high-mindedness of everything above gave way over time to the reality of slogging it in full exposure in the middle of the day in the desert ... Dusty. Biting horseflies. Heat. Softer and softer sand."

Crowe had to stop twice to clean and apply new tape to his feet, lance and treat new blisters, and change his socks.

"I had decided ... I would under no circumstance expend any emotional energy in complaining or suffering or resisting it ... I felt resistance at getting over that hot sand, but then remembered Marcus Aurelius proclaiming, 'The obstacle is the way.' And I immediately accommodated to it."

Crowe grew up in Winston-Salem, North Carolina, and attended Davidson College, where for a time he juggled his love of playing college baseball with the demands of his premed curriculum.

Eventually medicine won out. It was a way, he perceived, that he could have a positive impact on the world. For a while, he wanted to be a medical missionary. During medical school breaks, he visited and worked in sites in Senegal, Kenya and Papua New Guinea.

There he witnessed the deaths of children from infectious diseases that could have been treated or prevented, if only the appropriate medication or vaccine had been available. Seared into his memory is the moment he delivered a child's lifeless body to parents consumed by grief.

"If you have never personally experienced looking into someone's eyes and saying that something could have been done about this, but wasn't, and your child is dead," he told writer Jessica Pasley for a profile published by VUMC in 2009. "You don't get over that."

Crowe met his wife during their first year of medical school at the University of North Carolina (UNC), Chapel Hill. They married in 1987, the week before they graduated. They have two children, Stephen and Catherine.

After completing their residency training together at UNC, Crowe took a turn toward science in 1990, when he accepted a fellowship and later served as senior research investigator in the Laboratory of Infectious Diseases at the National Institute of Allergy and Infectious Diseases (NIAID), part of the National Institutes of Health (NIH).

He returned to Vanderbilt in 1995 for a fellowship in pediatric infectious diseases and was appointed to the faculty a year later. Among

many honors and recognitions, he was elected to the National Academy of Medicine in 2014.

The work of the VCAT, formerly known as the Vanderbilt Vaccine Center, has received significant support from the NIAID and the Defense Advanced Research Projects Agency of the U.S. Department of Defense, and from the German science and technology company Merck KGaA, which awarded Crowe a share of its Future Insight Prize in 2019.

Facilities also are important, and that's where VUMC has provided fertile ground for research, most recently planning construction of a third, NIH-funded Biosafety Level 3 lab. "The institution has been very supportive of us over the last decade to get us situated (into) ... a contiguous space where we can do the entire discovery program in one location," Crowe said.

There is much left to do in combating viruses. "We've mastered the early discovery part," Crowe said. "The next step is how to manufacture (antibody therapies) safely, quickly and cheaply."

This process, called Chemistry Manufacturing and Control, is one of the most expensive parts of drug development. It's one reason many promising therapies don't make it through what is called "the valley of death" in the drug development pipeline.

With IDBiologics, a privately held biotechnology firm he founded in 2017 with support from VUMC to develop antibody drugs, "we're talking to companies that have innovative technologies that would allow us to deploy these (manufacturing functions) in Nashville," he said.

Another goal is achieving the vision of a large-scale development program he designed and termed AHEAD100.

Even before COVID-19, the world was confronted with recurring outbreaks of one emerging virus infection after another: chikungunya in 2013, Ebola in 2014, then Zika in 2015.

Crowe and his colleagues came up with a preemptory response: Advanced Human Epidemic Antibody Defenses 100 — a list of nearly 100 viruses with pandemic potential that need to be addressed now. "We've been doing these projects or at least pursuing them, whether or not we had funding, (because) we need to do all 100," he explained.

To generate support for these projects, and to encourage greater collaboration among "pandemic prevention stakeholders," including academic research institutions like VUMC, the government and industry, Crowe helped establish a Maryland-based nonprofit, the Global Pandemic Prevention and Biodefense Center, in 2021.

The Research and Development of Vaccines and Monoclonal Antibodies for Pandemic Preparedness (ReVAMPP) program, announced in September 2024, is another step in that direction. The NIH has committed approximately \$100 million a year to support research at VUMC and six other centers aimed at developing antibody therapies for nine groups of viruses that pose the greatest risk to human health.

Crowe estimated it would take \$2.5 billion to develop, Phase 1 trial safety test, and stockpile antibodies for all the pathogens on the AHEAD100 list — \$25 million per virus. Considering the trillions of dollars the COVID-19 pandemic cost the U.S. economy, not to mention the millions of lives lost worldwide, "it's super cheap, and it's super wise to do it," he said.

On June 29, as he and his fellow runners rested at camp under Mongolian stars before attempting the last test of their ultra-exertions, Crowe posted this 15-word invocation of hope and acceptance: "Lord willing, I should finish now, given it's only six miles. Though anything can happen."

Finish he did. With a total running time over the seven-day course of 48 hours, 28 minutes, Crowe was squarely in the middle of the pack — 53rd of 107 runners who completed the ultramarathon. The fastest runner, a 40-year-old Japanese man, finished in 22 hours, 36 minutes. The youngest competitor was a 15-year-old Polish boy, and the oldest was a 71-year-old woman, a college professor from Arkansas.

But time and age weren't important, Crowe decided. The real prize was wisdom. There is a lot in this world that humans can control. There is a lot they can't. The wisdom is in knowing the difference ... and in being good with that.

After he returned home, Crowe summarized his experience in a LinkedIn post: "I'm still in the middle of a practical year's course in learning how to 'accept things as they are' ... I find that fully embodied experiences in the elements, when it is viscerally obvious you really cannot control uncontrollable things, drive the point home in ways that coaching, reading books and deep thinking just can't do."

Crowe has returned to the lab but, deep inside, the desert will always be with him.

"I didn't lose the North Star," he said. "The desire to make a difference never goes away. I realize we can't fix everything ... but I do dream that after we've done our work, more people will live, ... more children will survive to adulthood. If we contribute in small ways to that, I'll be very happy." ■

Top: Crowe shares a fist bump at the end of a day's journey. Bottom: Banners at the end of each stage of the Gobi March were a welcome sight.



Alumni notes

MD: VUSM CLASS • HO: HOUSE OFFICER • FE: FELLOW • FAC: FACULTY • BA/BS: VU CLASS

1960s

Rebekah Ann Naylor, MD’68, a longtime Baptist medical missionary, received the M.E. Dodd Denominational Service Award from Union University. This is the highest denominational service award given by the university.

1970s

Susan Niermeyer, MD’79, was honored with the 2024 Florence Rena Sabin, MD Award from the University of Colorado Anschutz Medical Campus.

1980s

C. Wright Pinson, MD’80, FAC, received the Martin E. Simmons Award at the 50th Anniversary Middle Tennessee Heart Gala on Feb. 17, 2024. Pinson, Deputy CEO and Chief Health System Officer at Vanderbilt University Medical Center, is stepping down from that role on June 30. He will continue as

President of the Vanderbilt Health Affiliated Network and serve as a senior counselor to the CEO of VUMC.

Sandra M. Swain, MD, HO’80, was appointed to the board of directors for Immunome Inc., a biotechnology company focused on developing targeted cancer therapies. Swain has over 30 years of oncology clinical research experience and has served on both public company and nonprofit boards.

Ronald E. “Ron” Wilson, MD’81, HO’83, joined Williamson Health Medical Group as an inpatient neurologist, providing care at Williamson Medical Center.

Richard E. Goldstein, MD, HO’82, FE’84, PhD’94, joined Bento Biology Platforms (Bento Bio) as Chief Executive Officer. Bento Bio is a platform company

designed to engineer trust in clinical trial participation and accelerate therapeutic development.

Hugh Francis III, BS’80, MD’84, received the Tennessee Medical Association’s Outstanding Physician Award in 2024.

Teresa Twila Charniga, MD’86, was named a Pinnacle Lifetime Member by CWW for her contributions to delivering compassionate primary care and wellness. She provides comprehensive primary care in private practice.

Benjamin R. “Rush” Waller III, HO’87, was named Chief Medical Officer at Le Bonheur Children’s Hospital and will serve as the medical director of Le Bonheur’s Adult Congenital Heart Disease program.

Kathleen M. Neuzil, HO’87, FE’91, & MPH’98, was selected as director of the Fogarty International Center (FIC) and National Institutes of Health associate director for international research. She is the first woman to hold the permanent FIC directorship since the center’s founding in 1968.

Kevin Bernard Churchwell, MD’87, and wife, Gloria Churchwell, established the Robert Sr. and Mary Churchwell Undergraduate Scholarship, a fund that will provide students with the gift his parents valued most of all: a Vanderbilt education.

Michael Bruce Zimmermann, MD’88, has been awarded the title of full professor in the University of Oxford’s 2024 Recognition of Distinction exercise.

Curtis Elam, MD, HO’89, has joined Beaufort Memorial’s Obstetrics and Gynecology team. He was formerly a staff physician and OB-GYN department head at the Clyburn Center for Primary Care, as well as OB-GYN staff physician at Aiken Regional Medical Center, both in Aiken, South Carolina.

1990s

Todd C. Smith, MD, HO’91, HO’92, joined the board of directors for American Medical Group Association, an association representing medical groups and integrated systems of care, in January 2024.

Jule Johnson West, MSN’91, MD’97, & HO’97, joined Siloam Health, a faith-based nonprofit that focuses on care for Nashville’s uninsured and immigrant population, as its Chief Medical Officer.

Make a difference

YOU NEVER THOUGHT POSSIBLE.

CANBY ROBINSON
Legacy CIRCLE
of Vanderbilt University
Medical Center



Considering a gift in your will?
Contact Vanderbilt University Medical Center’s Office of Gift Planning.

Adam Watts | 615-875-5037
giftplanning@vumc.org | VanderbiltHealth.org/giftplanning

Edward Riker “Ted” Arrowsmith, MD’92, HO’92, FE’97, has been promoted to Executive Vice President of Quality and Clinical Operations, Physician Services, and Therapeutics at Tennessee Oncology.

Angela Kay Wilson Curry, MD’93, is a new medical provider in the Medical Services Department at Pat Walker Health Center, joining the Women’s Clinic as a gynecologist. Curry served in the United States Air Force as an obstetrician-gynecologist.

Eric Zacharias, MD’93, was promoted to Chief Medical Officer at COPIC, a professional medical liability insurance company in Denver.

John A. Howington, MD, HO’94, is the new President of the American College of Chest Physicians, the global leader in the prevention, diagnosis and treatment of chest diseases. He is a thoracic surgeon at Virginia Mason Franciscan Health, St. Michael Medical Center, in Silverdale, Washington.

Matthew R. Foster, MD, HO’96, began his role in December 2024 as the first permanent CEO and President at central Vermont’s Mt. Ascutney Hospital and Health Center and Valley Regional Hospital.

Clifford Suhyun Cho, MD’97, was appointed Chief Medical Officer at University of Michigan Health-West in May 2024 and joined Van Andel Institute as a professor in the Department of Cell Biology in September 2024.

Jason T. Call, MD’98, joined the staff at Pacific Permanente Group, a Maui-based medical group providing health care services in nearly a dozen specialties, in February 2024.

Terry Trent Wilsdorf, MD’98, joined Diagnostic & Medical Clinic as a cardiologist with more than 20 years of experience.

Michael James Mugavero, MD’99, was chosen as the new associate dean for Clinical and Translational Research at the University of Alabama at Birmingham Heersink School of Medicine. In this newly created role, Mugavero will lead efforts to advance clinical and translational research.

2000s

Jennifer Joy Casaletto-Debelak, MD’00, was re-elected a member of the American College of Emergency Physicians Board of Directors to serve a three-year term. She is a physician at Atrium Health Carolinas Medical Center in Charlotte, North

Dear Alumni,

We’re turning 150! Vanderbilt University School of Medicine officially turns 150 this year, and we have a lot to celebrate on this “sesquicentennial” milestone! Each of you provides a piece of our VUSM story, and we would love to hear your experiences and memories. Scan the QR code at the bottom to share your memories and photos that we can compile for the future.



I continue to be grateful to work closely with 40 alumni who comprise our VMAA Board of Directors. At our annual meeting last fall, we recognized board members who completed their terms as well as welcomed our incoming board members.

Outgoing board members are Dr. Bob Boyce, Vanderbilt Orthopaedic Society; Dr. Cathy Fuchs, Luton Psychiatry Society; Dr. Saba Rehman, C/O 2024 student representative; Dr. Rohan Shah, Tennessee regional director; Dr. Deb Sherman, Savage Ophthalmology Society; and Dr. Austin Tipold, 2024 house staff representative.

I would also like to give special recognition to Dr. Mary Laird Warner, who completed her two-year term as VMAA President. My thanks to all of these alumni who gave their time in service to VMAA.

Incoming board members are Dr. Sean Donahue, Savage Ophthalmology Society; Dr. Stephen Engstrom, Vanderbilt Orthopaedic Society; Yanelis Diaz Greenberg, C/O 2025 student representative; Dr. David Marcovitz, Luton Psychiatry Society; Dr. Raj Narayani, Tennessee regional director; and Dr. Marie Kuzemchak Patten, 2025 house staff representative. In addition, Dr. Elise Fallucco began a two-year term as President, and Dr. Paul Pearigen began a two-year term as President-elect.

2025 will be an exciting year in many ways — including the return to an annual VUSM Reunion celebration! Moving to an annual reunion will allow us to foster stronger, more frequent connections with our alumni population. We are thrilled to welcome our VUSM alumni who graduated in years ending in -0 and -5 to Nashville, Nov. 6-8. We look forward to celebrating together annually and reconnecting with old friends.

We continue to seek opportunities to engage with our Vandy Med alumni, so keep an eye on our websites, social media and email for ways you can stay connected to us and your fellow alumni. This 150th anniversary represents a legacy of excellence in education, research and patient care that carries on with each of you, and I know you will continue to make a profound impact on medicine and health care worldwide.

Sarah Creechmore Woodell



ALUMNI PROFILE: ANNA TANNER, MD'95



+
photo by Erin O. Smith
written by Nancy Humphrey



SNAPSHOT

FAMILY

Husband, W. Gordon Tanner, MD (VU'93), children, Will and Katie (VU'23)

FAVORITE VUSM MEMORY

As an Amos Christie scholar, she did bench research on pituitary tumors and spent clinical time with Jennifer Najjar, MD. She says her career focus came from this experience.

VUSM INVOLVEMENT

Tanner currently serves on the Vanderbilt Medical Alumni Association Board of Directors, as the VMAA Southeast Regional Director.

An Accidental Career

Anna Tanner, MD'95, a pediatrician and global expert on eating disorders, landed in an "accidental career" brought about by the growing number of youth in her Georgia community who were developing eating disorders.

"It wasn't what I carved out to do. I didn't hang out a shingle. I didn't even focus my areas of interest on eating disorders while I was a medical student, then a resident and a clinical instructor at Vanderbilt University Medical Center. It was a need I saw in my community," she said.

Tanner, who lives in Duluth, Georgia, northeast of Atlanta, said her Vanderbilt University School of Medicine education and training at VUMC prepared her well for her career.

"I had great mentors in adolescent medicine (and endocrinology), specifically around eating disorders (former faculty members Laurie Mitani, MD, Ovidio Bermudez, MD, and Jennifer Najjar, MD) and a long incubation period in what good eating disorders care really looks like," she said.

When Tanner joined a general pediatrics practice in Gwinnett County, she and her partners quickly realized that eating disorders impact all populations. The age of onset is now under 12 in almost one-third of youth diagnosed with eating disorders.

She quickly became the eating disorders specialist in her practice. During her 18 years with the group, the population of patients with eating disorders grew to such an extent that she wasn't able to see all of them.

"I wasn't providing care in a multidisciplinary setting," she said. "They were seeing me in my office, then driving across Atlanta to see a dietitian, somewhere else to see a psychiatrist and somewhere else to see a therapist. If they needed more support, they were often traveling out of state."

Tanner left her practice eight years ago to help establish Veritas Collaborative, which became Accanto Health, an eating disorders treatment facility in Georgia. In addition to her patient load there, she became a highly regarded national and international speaker, writer and advocate on the topic of eating disorders.

She helped design a certification process (exam, course and syllabus) for providers with the International Association of Eating Disorders Professionals. She also helped lead a three-part webinar on eating disorders in children and adolescents offered in 2024 by the American Academy of Pediatrics.

Tanner, who has since left Veritas, said patients and their families continue to have challenges navigating a system that "isn't mature. If your child has cancer, they would be referred to a pediatric cancer facility. We just don't have those systems in place for eating disorders."

She plans to continue her long-term roles as adjunct faculty for Emory University and Morehouse College and will continue to work closely with Children's Healthcare of Atlanta.

Carolina, and a practicing emergency physician with CirrusMD.

Timothy J. Edwards, HO'00, joined Saint Francis Healthcare System's Gastroenterology Associates. He is board certified by the American Board of Internal Medicine and specializes in gastroenterology.

Tyler W. Barrett, MD'01, MSCI'10, FAC, has been appointed the first Associate Chief Medical Officer for Compliance at VUMC.

Colin MacLeod Barker Sr., HO'01, FAC, has been selected for inclusion in Marquis Who's Who. He currently serves as an associate professor, director of Interventional Cardiology, the director of the Cardiac Catheterization Laboratory, and the director of the fellowship training program at VUMC since 2019.

Eric Lee Wallace, MD'01, HO'01, joined the medical staff at Cookeville Regional Medical Center and has joined Middle Tennessee Surgical Specialists.

Constance M. Mobley, MD'03, PHD'03, associate director of Liver Transplantation at Houston Methodist Hospital and associate professor of Clinical Surgery at Weill Cornell Medical College, returned to Vanderbilt in 2024 to present the 23rd Annual Levi Watkins Jr., MD Lecture.

Nicole S. McCoin, BS'99, MD'03, accepted a new role as professor and vice dean for Faculty Affairs and Development at the University of Kentucky College of Medicine.

George S. Vratsanos, MD, MSCI'03, joined the Board of Directors for Nkarta Inc., a biopharmaceutical company which engages in the discovery, development and commercialization of natural killer cell therapies for the treatment of cancer.

Andrew A. Stec, MD, HO'04, was appointed as Vice President, Chief Medical Officer at Nemours Children's Health in Jacksonville, Florida.

Allyson Hingle Boudreaux, MD, HO'05, was elected to a one-year term as chief of the medical staff, the highest elected medical leadership position at Woman's Hospital in Baton Rouge, Louisiana.

Sean Moore, MD, MS, HO'06, FE'09, a board-certified pediatrician and pediatric gastroenterologist, has been named the Mitchell Cohen chair and division director of Gastroenterology, Hepatology and Nutrition at Cincinnati Children's.

Giving in Action

+ THE VRTISKA 'JOY IN SERVICE' SCHOLARSHIP

For Terri Vrtiska, MD'87, the drive to help others was part of her life long before she enrolled in the Vanderbilt University School of Medicine.

Her parents — a teacher and a farmer by trade — were pillars of the small, 4-by-7-block community of Table Rock, Nebraska, where she grew up. Between the two of them, they served a combined 70 years in elected public offices, including the school board, as county commissioner and as a Nebraska state senator among many other roles. "They were the first people anywhere to help anybody in need," Vrtiska recalls. "They gave countless years of service, and they left that legacy with me and my siblings."

Helping others has certainly been a refrain throughout Vrtiska's own career — from early jobs as a lifeguard, waitress and newspaper carrier, to her 34 years at the Mayo Clinic in Rochester, Minnesota, where she studied as a surgical resident and, subsequently, became a diagnostic and interventional radiologist. Today, she shares her passion for volunteering and giving back with her husband, Bernie Swenson, who was instrumental in the couple's decision to establish the "Vrtiska Joy in Service" scholarship at the School of Medicine in January 2024.

Named in honor of Vrtiska's parents, the scholarship holds an awarding preference for medical students with demonstrated experience working in voluntary or charitable organizations. "To be able to support future physicians who have demonstrated a desire to help others from an early age, especially through voluntary service, just felt like the perfect fit to honor my parents," Vrtiska says. "Knowing how expensive medical school is and also how much my own time at Vanderbilt impacted my career, we knew we wanted this scholarship fund to be part of our legacy."

Vrtiska and Swenson were also drawn to the option Vanderbilt offered to start the fund during their lifetime, allowing them to witness its impact on students directly while also growing the fund further through a planned gift. "We talked through a number of different structures, but this one felt really meaningful," Swenson says. "It was important to us to be able to witness firsthand how a deserving student will benefit."

The scholarship is also a tribute to Vrtiska's many fond memories of Vanderbilt, from her beloved anatomy professor, Dr. Jack Davies, whose meticulous drawings helped spark her interest in painting — a passion she pursues more avidly today, during her retirement — to the overall spirit of support that she remembers feeling on campus. As she puts it, it was an environment where everyone wanted her to succeed.

"I'm so glad we can support Vanderbilt in this way," says Vrtiska of the gift, which also contributes to the university's Dare to Grow fundraising campaign, a historic effort that is currently underway, and for which student access and support is a top priority. "I've had a lot of wonderful moments in my life, but when we received the official approval of the scholarship, it really made my heart sing."

She hopes that their gift will inspire others to give back, in whatever way is most meaningful to them. ■ *Lucie Alig*



Terri Vrtiska, MD, and her husband, Bernie Swenson

Giving in Action

+ HONORING A FAMILY'S PASSION FOR EDUCATION



Curt Parnes, MD, left, and his father, Ralph Parnes

gerly embraces his work, especially caring for the children of his previous patients.

He and his sister, Cindy Parnes, MD'85, describe their parents, Helene and Ralph Parnes, as "exceptionally smart." Their father worked in the insurance industry, and their mother pushed him to open his own agency, which still operates to this day. Their other sister and her son now work for the family business.

"Despite them not being college educated, our parents made sure all of us were," Cindy said. "We are where we are today because of them."

After completing his undergraduate degree at Franklin & Marshall College, Curt explored options for medical school.

"I was accepted by other institutions, but in the end, there was really no choice," he said. "I was going to Vanderbilt, where students received quality education and support. We knew that when we graduated we would be competitive with graduates from any other medical school."

While attending Vanderbilt University School of Medicine, the Parnes siblings made memorable connections with faculty members including the late Philip Felts, BA'52, MD'56.

"During one of my first nights at Vanderbilt, my entire class was at the dean's house," Curt said. "Dr. Felts greeted me by name and talked with me. He knew where I was from, and he knew every other person in the class. I then understood that Vanderbilt was a warm place to be. Medical school is hard work, and knowing the faculty and administration had our backs made a difference."

Curt is proud of how the School of Medicine has continued to push boundaries and prepare current students through volunteerism and other accomplishments.

"Vanderbilt put me on my lifelong career path," he said. "That's why Susan and I gave back over the years. Our goal in creating this fund was to ease the financial burden for future generations of aspiring physicians by helping them to overcome barriers and pursue their dreams."

The Parnes' gift will also contribute to the university's Dare to Grow fundraising campaign, which aims to increase access and crucial scholarship support for Vanderbilt students. ■

Payton Baggett Reynolds

The Helene and Ralph Parnes Scholarship has not only given Curt Parnes, MD'82, the opportunity to recognize his parents for their dedication to his education, but also to celebrate the life of his late wife, Susan, who passed away in February 2024, just months after she and Parnes established the new scholarship.

The couple met when Susan visited her brother at college in Pennsylvania, where he and Curt were freshmen dorm buddies. Curt and Susan married a few years later, in 1980, following her graduation from the University of Pennsylvania. They went on to have two children together, Danielle and Leah. Susan was a certified architect, designed jewelry, and in recent years, she even learned cake decorating. She volunteered with organizations such as Icing Smiles, which provides custom cakes for children impacted by critical illness.

Curt is a pediatrician in the Philadelphia area and has been in private practice for nearly 40 years. He ea-

Kyle Clifford Cuneo, MD'07, HO'07, was named associate director for clinical research at the University of Michigan Rogel Cancer Center. He will oversee the clinical research-related components of Rogel's National Cancer Institute Cancer Center Support Grant.

Aaron N. Hata, MD'07, PhD'05, has joined the Scientific Advisory Board for the Lung Cancer Research Foundation. Hata is an assistant physician in Hematology-Oncology at Massachusetts General Hospital and assistant professor of Medicine at Harvard Medical School.

Steven Walter Thorpe, MD'07, joined the Department of Orthopedics at the University of Colorado School of Medicine as the new chief of the musculoskeletal oncology program.

Mahnoosh "Mona" Sharifi, MD'07, MPH, has been named section chief of General Pediatrics at Yale School of Medicine and Yale New Haven Children's Hospital. In addition, Sharifi will be leading a newly established program in Pediatric Health Services and Implementation Research.

Eiman Jahangir, MD, FE'09, MPH'13, FAC, fulfilled a lifelong dream of becoming an astronaut, joining a team that went to space on Blue Origin NS-26 mission in August 2024. He is an assistant professor of Cardiovascular Medicine at VUMC.

Margaret Brannigan-Thieman, MD, HO'09, was named Vice President of post-acute services, a newly created West Virginia University Health System role that includes oversight of home health, hospice and durable medical equipment.

Kim Lori Sandler, MD'09, HO'09, FAC, who was promoted to professor in July 2024, was named vice chair of Faculty Development in the Department of Radiology and Radiological Sciences at VUMC. She is also the director of the Vanderbilt Lung Screening Program.

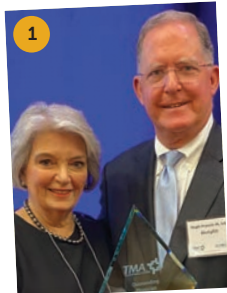
2010s

Reyna L. Gordon, MD, FE'10, FAC, associate professor of Otolaryngology-Head and Neck Surgery, has been appointed director of the VICTR KL2 Program and director of Postdoctoral Training for Edge for Scholars at VUMC.

Sunita Misra, MD'10, PhD'08, Vice President of Global Clinical Development and acting Chief Medical Officer of SK Life Science Inc., a U.S. pharmaceutical

Faces & Places

Want to see your photo here? Send high-resolution images to medalum@vanderbilt.edu.



1. In April 2024 Hugh Francis III, MD'84, of Memphis Surgery Associates, received the Tennessee Medical Association's 2024 Outstanding Physician Award, with wife, Lysbeth Francis by his side. **2.** Caroline Maguire, MD'22, and Leland Dunwoodie, MD'22, met at VUSM and were married on Nov. 16, 2024, where a large contingent of Vanderbilt Med alumni and friends were in attendance. They are both currently completing a pediatric residency at Cincinnati Children's. **3.** Since the student-run Shade Tree Clinic opened in 2004, Robert Miller, MD'82, HO'82, FE'88, has been a guiding force. In 2024, his retirement from Vanderbilt was marked with a celebration and silent auction benefiting the clinic. The auction raised more than \$19,000. He is shown here with wife, Bonnie Miller, MD, HO'80, MMHC'16, former senior associate dean for Health Sciences Education at VUSM, during the event. **4.** Alumni and current faculty and trainees from the Medical Physics program gathered at the American Association of Physicists in Medicine annual meeting in Los Angeles in July 2024. The interdisciplinary program includes instruction from the VUSM Department of Radiology and Radiological Sciences, the College of Arts and Science, and the School of Engineering. **5.** Lauren Barr, MD'20, and Philip Wilson, MD'21, married in Jacksonville, Florida, on May 24, 2024. They were joined by a number of fellow Vanderbilt Med alumni to celebrate the occasion. **6.** Daniel France, PhD'97, MPH, professor in the Center for Research and Innovation in Systems Safety in the VUMC Department of Anesthesiology, shares his insights during the 2024 Research Connections event at VU. **7.** The Jahangir family attended the November 2024 Simpson Deans' Lecture presented by Eiman Jahangir, MD, MPH'13, associate professor of Medicine and Radiology and director of Cardio-Oncology, third from right. Jahangir shared his experience as a crew member on the Blue Origin suborbital space flight in August 2024. His brother, Alex Jahangir, MD, MMHC'12, far left, is vice chair of VUMC's Department of Orthopaedic Surgery. **8.** Sean Moore, MD, MS, HO'06, FE'09, a pediatrician and pediatric gastroenterologist, has been named the Mitchell Cohen chair and division director of Gastroenterology, Hepatology and Nutrition at Cincinnati Children's. **9.** The Soliman family poses for a photo following the White Coat Ceremony held in Langford Auditorium at VUSM on July 26, 2024. Paul Soliman, center, is the latest of the Soliman family to receive his white coat.



ALUMNI PROFILE: SUSAN NIERMEYER, MD'79, MPH

+
photo by Donn Jones
written by Nancy Humphrey



SNAPSHOT

FAMILY

Husband, John Brett, PhD

FAVORITE VUSM MEMORY

Watching Jack Davies, MD, professor of Cell Biology and chair of Anatomy, draw anatomic diagrams with chalk in both hands “long before the digital anatomy lab”

HOBBIES

Farming her entire urban backyard as a vegetable garden; studying and collecting textiles from around the world; creating textiles by spinning, weaving, knitting, embroidery and sewing

Global advocate for infants

Susan Niermeyer, MD'79, MPH, has had two careers, running simultaneously. They both, at their core, focus on how to best care for newborns.

A full-time neonatologist doing clinical care, research and education at the University of Colorado and Children's Hospital Colorado for more than four decades, Niermeyer's areas of expertise include neonatal resuscitation, cardiopulmonary physiology in infancy, and global neonatal survival.

She has had critical roles in several initiatives, including co-chairing the American Academy of Pediatrics (AAP) Neonatal Resuscitation Program Steering Committee and serving as a volunteer for evidence evaluation and guidelines development in neonatal resuscitation.

Niermeyer, who retired and became professor emerita at the University of Colorado in 2022, also has been intensively involved in global newborn health, working with the World Health Organization (WHO) and the U.S. Agency for International Development.

Niermeyer began her outreach work closer to home, making sure neonatal units in smaller communities in rural Colorado, Montana and Wyoming had access to the best practices to care for newborns.

That led to her work with the AAP, where she was active in developing materials for the Neonatal Resuscitation Program and teaching the program in other countries. She was editor-in-chief for the development of Helping Babies Breathe, an AAP program to prepare health workers in resource-limited settings with the skills to provide lifesaving care to newborns. This led to the development of the 2024 WHO Essential Newborn Care Course 2nd Edition.

Niermeyer's global outreach has taken her all over the world, to China, Tibet, India, Bangladesh, Nepal, Mexico, and many countries in Central and South America as well as Africa.

“There's a huge need in neonatology for people who have direct clinical experience, who have a public health background, and can put that together in educational programs. I feel like my clinical experience prepared me to help make these educational materials for use in low- and middle-income countries.

Niermeyer and three classmates co-chaired their class's October Reunion celebration. They enjoyed reminiscing about their days at VUSM as they planned and contacted classmates.

One experience she'll never forget is working in the lab of the late Mildred Stahlman, MD, and riding to rural Tennessee in the mobile “Angel” neonatal intensive care unit.

“I recall riding over dirt roads to pick up a baby, then riding back over those same dirt roads, kneeling beside the isolette to push some packed red cells,” she said, adding that Stahlman, who died in 2024, had a huge impact on her career. “She was a force, and everybody she touched carries a little bit of her with them.” ■

company developing treatments for central nervous system disorders and a subsidiary of SK Biopharmaceuticals Co. Ltd., has been selected as a fellow of the American Epilepsy Society.

Jacob Paul VanHouten, MS'13, MS'16, MD'18, PhD'16, joined the Bassett Healthcare Network where he provides comprehensive medical care to adult patients. VanHouten is also serving as Bassett Healthcare Network's Assistant Chief Medical Informatics officer.

David James Voce, MD, HO'14, joined Tampa General Hospital and USF Health as an assistant professor in the USF Health Morsani College of Medicine Department of Neurosurgery and Brain Repair in the Division of Cranial and Neuro-Oncology.

Evan Brittain, MD, MSCI'14, FAC, has been named holder of the Cardiology Division Directorship at VUMC.

Joshua Aaron Cohn, MD, FE'15, was named a consultant at Shriners Children's Philadelphia in February 2024, where he cares for patients with neurogenic urologic conditions.

Michael Kwame Poku, BA'09, MD'15, was appointed by Texas Governor Greg Abbott to the Advisory Council on Cultural Affairs. He is also the Chief Clinical Officer of Equality Health.

Dillon Christopher O'Neill, MD'18, joined Indianapolis-based Indiana University Health Physicians as an orthopaedic trauma surgeon. He specializes in traumatic injuries and associated post-traumatic orthopaedic problems.

William W. French, MD'19, joined Urology Associates of Nashville as a general urologist in September 2024.

2020s

Lauren Barr, MD'20, and **Philip Wilson**, MD'21 married in Jacksonville, Florida, on May 24, 2024.

Varun Menon, MD'20, and **Candace Grisham**, BE'18, expected MD'26, expected PhD'25, were married on June 29, 2024, in Nashville.

Michael Raddatz, PhD'20, MD'21, and **Demetra Hufnagel**, MD'21, were married on Oct. 8, 2023, on the island of Oahu.

Leland Dunwoodie, MD'22, and **Caroline Maguire**, MD'22, were married in Atlanta on Nov. 16, 2024.

Losses

E. Vernon Anderson Jr., MD'69, HO'70, died May 27, 2024. He was 80. Dr. Anderson is survived by his wife, Gwyn; sons, John, Alan and Chris; and 11 grandchildren.

Robert Carver Bone, BA'58, MD'62, HO'67, EMBA'85, died March 11, 2024. He was 87. Dr. Bone is survived by his wife, Connie; children, Robert and Bonnie; and three grandchildren.

Alfred Willard "Al" Brann Jr., BA'56, HO'60 & '61, died Jan. 31, 2024. He was 89. Dr. Brann is survived by his wife, Peggy; children, Will and Stewart; and two grandsons.

James Ray Callison, MD'58, HO'58, died March 27, 2024. Dr. Callison is survived by his wife, Barbara; children, Dan, Cathey, Scott, Liz, Tanya, Theresa and Todd; and nine grandchildren.

Jerry N. Clanton, MD'58, HO'58, FE'59, died March 24, 2024. He was 91. Dr. Clanton is survived by his wife, Jan; daughter, Jana; and two grandchildren.

Robert "Bob" Barnard Couch, BA'52, MD'56, HO'56, died Aug. 15, 2024. He was 93. Dr. Couch is survived by his partner, Susan Sheridan; children,

Steve Couch (Christie), Leslie Couch (David Finlay), Colleen Reed (Scott) and Betsy Radtke (Mark); 10 grandchildren and four great-grandchildren.

William Melville Doak, HO'58, FAC, died April 20, 2024. He was 94. Dr. Doak was a clinical professor of Pediatrics at VUMC for nearly five decades. He was also an accomplished bronze sculptor, and several of his works are in the sculpture garden at Monroe Carell Jr. Children's Hospital at Vanderbilt. He is survived by his wife, Dr. Margarette Johnston; and children, Arthur, BE'79, Anice, BA'82, William and Robert.

Robert Currin Dunkerley Jr., BA'65, MD'68, HO'68, died Feb. 2, 2024. He was 80. Dr. Dunkerley is survived by his sons, John and Mark, BS'99; and two grandsons.

Stanley M. Elmore, BA'55, MD'58, HO'58 & '62, FE'65, died Feb. 6, 2024. He was 90. Dr. Elmore is survived by his sons, Kelly, Mark, Andrew and Peter; and 10 grandchildren.

William Tyree "Ty" Finch, HO'66 & '72, died Feb. 20, 2024. He was 84. Dr. Finch is survived by his wife, Anita; children and stepchildren, Julia, Susan, Carolyn, Adam, Katie and Mary; and 10 grandchildren.

J. Edward Fisher, MD'53, died Nov. 30, 2023. He

CANBY ROBINSON SOCIETY

Join the Canby Robinson Society or renew your membership today to join our most dedicated donors supporting research, training and patient care at Vanderbilt University Medical Center. As a member, you'll make a lasting impact alongside our loyal donors.



VanderbiltHealth.org/CRS

VANDERBILT UNIVERSITY
MEDICAL CENTER

was 96. Dr. Fisher is survived by his wife, Martha; children, J. Edward Jr., Leslye and David; and three grandchildren.

Edward “Todd” Thomas Frank Jr., HO’65, died March 1, 2024. He was 89. Dr. Frank is survived by his wife, Sylvia; daughters, Julia and Elizabeth; and four granddaughters.

Thomas Ashford Gibson, HO’65, died Feb. 15, 2024. He was 92. Dr. Gibson is survived by his wife, Jeri; children, Tom and Jeri; and seven grandchildren.

Gary Gene Gilbert Sr., attended MD’63, died July 22, 2024. He was 89. Dr. Gilbert is survived by his wife, Betty Ruth Carroll Gilbert; daughter, Elizabeth G. Lucas; sons, Gary G. Gilbert Jr. (Debbie), Michael Scott Gilbert and Christopher Todd Gilbert (Diane); seven grandchildren and four great-grandchildren.

James R. “Jim” Halpert, MD, FE’81, died June 3, 2024. He was 74. Dr. Halpert is survived by his wife, Li Wang.

Phillip Walton Hayes, HO’69, FE’71, died March 28, 2024. He was 81. Dr. Hayes is survived by his wife, Marilyn; children, Laura and Neal; and two granddaughters.

James Hugh Haynes, FE’72, HO’72, died March 28, 2024. He was 88. Dr. Haynes is survived by his wife, Mary; children, James, Charles, Charlotte and Jennifer; and eight grandchildren.

William C. Heird, MS’63, MD’64, died Nov. 24, 2022. He was 86. Dr. Heird is survived by his wife, Jane.

John H. “Jack” Lyons, MD, HO’55, died May 9, 2024. He was 95. Dr. Lyons is survived by his wife, Terry; children, John H. Lyons III, MD, William Gwynn Lyons (Susan Diesel) and Tracy Lyons Rodriguez (Zane Rodriguez); and several grandchildren and great-grandchildren.

Jay Michael Marion, MD’77, HO’80, died March 13, 2024. He was 73. Dr. Marion is survived by his wife, Carol Ann; children, Amy, Gayle and Dana; stepchildren, Melissa, Amanda and Timothy; and six grandchildren.

William Maddux McClarin Jr., BA’57, MD’60, died March 25, 2024. He was 88. Dr. McClarin is survived by his children, Flora and Bill; and eight grandchildren.

Read Flournoy McGehee Jr., MD, HS’62, died July

3, 2024. He was 87. Dr. McGehee is survived by his wife, Virginia Withers McGehee; children, Read McGehee III (Cathy Smylie McGehee), John McGehee (Sandra Quigg), Marshall Lewis (Jeff) and Caroline McGehee (Michael Harvey); and nine grandchildren.

Alfred Wayne Meikle, MD’65, HO’65, died March 29, 2024. He was 86. Dr. Meikle is survived by his wife, Sharon; sons, David and Brian; and nine grandchildren.

John M. “Ace” Passmore Jr., HO’73, died Jan. 17, 2024. He was 76. Dr. Passmore is survived by his wife, Donna; children, Starr, Jackie, Skye and Grant; and six grandchildren.

Hugh William Pettigrew, MD’73, died Feb. 17, 2024. He was 76. Dr. Pettigrew is survived by his wife, Amy; daughters, Ann and Emily; and four granddaughters.

Susan Lynn Pflieger, MD’81, died April 28, 2024. She was 68. Dr. Pflieger is survived by children, Graham and Allie.

Julie Anne Riddle, MD, HO’94, died Aug. 24, 2024. She was 62. Dr. Riddle is survived by her husband, David W. Miller, MD, HO’93, HO’95, and children Michael Allan Miller and JoAnna Sage Miller.

W. Wike Scamman, MD’57, died March 23, 2024. He was 92. Dr. Scamman is survived by his children, George, Sara, Amy, Will and Glenn; and nine grandchildren.

Mary Pullig Schatz, MD’69, HO’69, died June 10, 2024. She was 79. Dr. Schatz is survived by her sons, David and Douglass; and three grandchildren.

Noel C. Scidmore, MD’88, died Aug. 18, 2024. He was 65. Dr. Scidmore is survived by his wife, Sandy; stepdaughter, Tanya Mims (Seth); and grandsons, Braxton and Merrick.

Michael Jon Spalding, MD, HO’66, ’70, died Dec. 11, 2024. He was 83. Dr. Spalding is survived by his wife, Mary; daughters, Ashley (Brendan Brogan) and Alice (Nick Symbas, MD); and grandchildren, Brendan Brogan III, Michael Brogan and Helen Symbas.

Mildred Thornton Stahlman, BA’44, MD’46, HO’48, FAC, died June 29, 2024. She was 101. Dr. Stahlman is internationally known for advances in the care of high-risk infants and pioneered the use of

respiratory therapy for infants with damaged lungs. Dr. Stahlman is survived by nephews, George and Thomas; and nieces, Mary and Margo.

Paul Rust Stumb III, BA’56, MD’60, HO’65, died June 22, 2024. He was 90. Dr. Stumb is survived by his wife, Mary; children, Paul, Thomas BA’83 and Susan BS’89, MED’96; and 11 grandchildren.

Donald A. Taylor, HO’57, died Dec. 22, 2023. He was 91. Dr. Taylor is survived by his wife, Cherylann; children, Adam, Jennifer and Elisha; and three grandchildren.

Alexander Sloan Townes, MD’53, died Oct. 15, 2024. He was 94. Dr. Townes is survived by his wife, Emily; children, Alexander Jr., Emily, Mary, John and Anne; 10 grandchildren; one step-grandchild; and four great-grandchildren.

David H. Wasserman, PhD, FAC, died June 20, 2024. He was 66. Dr. Wasserman is survived by his children, Micah and Mira.

Richard Everly “Rip” Waters II, MD’98, died Sept. 24, 2024. He was 53. Dr. Waters is survived by his wife, Erica Reed Waters, MD’98; and children, Ella and Reed. He is also survived by his mother, Joanne Waters; brothers, Robert (Sara) Waters and Randall (Janée) Waters; sister-in-law, Lindsay (Scott) Horner; parents-in-law, Leon and Denise Ree; and several nieces and nephews.

Thomas William Wilson, HO’61, died July 17, 2024. He was 87. Dr. Wilson is survived by his wife, Barbara “Jean,” children, Thomas II, Tad, Glen “Taylor,” Matthew, Catherine and Stuart; and five grandchildren.

Lawrence K. “Larry” Wolfe, BA’57, MD’60, HO’60, FE’64, died April 14, 2024. He was 87. Dr. Wolfe is survived by children, Lynne and Kevin; and three grandchildren.

John McDowell Wolff, BA’62, MD, FE’74, died June 11, 2024. He was 83. Dr. Wolff is survived by his wife, Ellen; her children and grandchildren; and children, Mary Catherine Wolff and Preston Campbell Wolff.

Jinlong Yang, FE’96, died Feb. 4, 2024. He was 86. Dr. Yang is survived by his wife, Meiyang Zhu; children, Wei Jiang, Sheng Bo Zhu and Hong Yang; and several grandchildren.



1954

BREAKING NEWS

The U.S. Supreme Court handed down a unanimous decision in *Brown v. Board of Education of Topeka*, ruling that racial segregation in public educational facilities is unconstitutional.

SCIENCE

The first mass inoculation of a polio vaccine developed by Jonas Salk, MD, took place when 137 schoolchildren in Pittsburgh rolled up their sleeves.

ENTERTAINMENT

Bill Haley and His Comets released "Rock Around the Clock," one of the earliest and most successful rock 'n' roll records.

VUSM THROUGH TIME

In 1954 Mildred T. Stahlman, MD'46, received a National Institutes of Health grant to study hyaline membrane disease. Her pioneering work transformed the respiratory care of premature infants. Dr. Stahlman died in 2024.

VANDERBILT MEDICINE

Vanderbilt University Medical Center
PMB 407731
2301 Vanderbilt Place
Nashville, TN 37240



INVEST IN THE FUTURE OF MEDICINE: MAKE A GIFT TO SUPPORT SCHOLARSHIPS

Support Vanderbilt medical students through scholarships and help strengthen the future of health care for all. Scholarships are a priority of our Dare to Grow fundraising campaign, and providing competitive financial aid packages is essential in attracting the best and brightest students. **Dare to make a difference. Give today.**



"My scholarship at the Vanderbilt University School of Medicine has been an incredible gift. It has relieved me of significant financial burdens, allowing me to redirect my focus toward my studies and extracurricular activities so that I can become a better and more well-rounded physician for the sake of my future patients. I cannot express how thankful I am."

—Sunaya Krishnapura, Vanderbilt University School of Medicine,
Class of 2025

DARE TO GROW

Give. Go. Help. Share.

Learn more at vu.edu/daretogrow.

