

OUR MISSION

Transforming health and inspiring hope for all Virginians and beyond.

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FROM THE DEAN

Each and every day, I am grateful for this inspiring community—how we at the School of Medicine are pioneering technological breakthroughs while remaining intensely human in our care of patients, education of learners and trainees, and service to our community. In that spirit, let me proudly introduce our UVA School of Medicine 2023 Annual Report.

Our mission remains to transform health and inspire hope for all Virginians and beyond. We do so across four specific pillars, which act as the very DNA of that mission: patient care, education, research, and community engagement.

We have so much to celebrate from the 2022–2023 academic year, and the world noticed. *Newsweek* named our medical center No. 1 in Virginia and No. 42 in the country! *U.S. News & World Report* ranked our Children's Hospital No. 1 in Virginia for the third year in a row, and nine out of 10 pediatric specialties ranked top 50 in the country. Dr. Sanjay Gupta, CNN chief medical correspondent, visited UVA Health to film an episode for *Vital Signs* on the pioneering work of our focused ultrasound team to treat patients with essential tremors. These are just a few examples that demonstrate how our amazing faculty and top-notch researchers make it possible for us to save lives through extraordinary clinical care.

Our education mission remains a strength too. We continue to attract the brightest and most talented medical and graduate students. For the tenth consecutive year, our Graduate Medical Education program—which trains our residents and fellows—was reaccredited by the ACGME without a single citation. And every year, our students make a difference in our community by volunteering at nonprofits across Charlottesville.

With respect to research, the School of Medicine experienced an unprecedented year. For the first time in the history of the school, the research portfolio grew by more than 25 percent: from \$226 million to \$287 million. This level of growth in research in one year reflects the hard work of our existing physician-scientists and scientists throughout the School of Medicine. And it supports the goals of our 10-year strategic plan to expand our presence and enable greater discoveries.

Furthermore, UVA received a landmark gift from Paul and Diane Manning. With additional support from the Commonwealth, UVA, and UVA Health, this gift has catalyzed the commitment to build the Paul and Diane Manning Institute of Biotechnology, which should break ground by year's end. The institute will provide a rich collaborative environment, allowing world-renowned researchers to produce innovative solutions for human care and address some of the most complex healthcare issues of today. Further, this institute will be transformational for UVA and the state of Virginia by positioning us as a hub for biotech research and attracting pharmaceutical and industry partners to collaborate with UVA.

I couldn't be more excited about all that is happening at the UVA School of Medicine. I hope you enjoy reading this Annual Report and celebrating our team members' accomplishments during this past year. I invite you to join us as we build One Future Together.

Sincerely,

Melina Kibbe, MD

Dean, UVA School of Medicine James Carroll Flippin Professor of Medical Science Chief Health Affairs Officer, UVA Health



Sean Moore, MD, and his lab team celebrate a \$100,000 grant from the Jefferson Trust for their research. Team members include (standing from left) Vinicios Alves da Silva, Samir Muhammad, and Georgia Brousseau. "We are supporting and diversifying our scientific landscape, expanding our research portfolio, and building a new biotechnology facility—all in the interest of discovery and its translation to better human health."

Jeffrey R. Martens, PhD Senior Associate Dean for Research

RESEARCH

With over \$287 million in total research dollars and \$181 million in NIH research awards, the UVA School of Medicine is an internationally recognized, innovative, and collaborative leader in research that advances science, pioneers the treatments of tomorrow, and improves the health of all people on a global scale.

2022-2023 BY THE NUMBERS

\$**287**м

total research dollars

\$**181**_M

NIH research awards

22

members of the National Academy **30**th

U.S. News & World Report research rankings

42nd

NIH Blue Ridge ranking

665

active clinial trials

3

Nobel Prize awards

4,877

peer-reviewed publications

2,514

clinical trial subjects enrolled



Paul and Diane Manning Institute of Biotechnology Will Revolutionize Healthcare

UVA stands at the forefront of cutting-edge biotechnology research with the building of the Paul and Diane Manning Institute of Biotechnology. The planned-for fall 2026 opening will launch UVA—and the Commonwealth of Virginia—into a revolution of care, guaranteeing that no Virginian need leave the state for even the most complex treatment.

The institute will be named after the couple who donated \$100 million toward its creation, to which UVA Health and the Commonwealth are also adding financial commitments—creating a unique partnership that will benefit both patients and the research mission across the state.

"The hope is that this will attract industry partners who will collaborate with us to develop their therapies for patients," says Melina Kibbe, MD, dean of the School of Medicine. "We'll be creating new jobs and new technologies for improving human health."

The institute, with ground breaking at year's end, will include an estimated 350,000 square feet of research space plus cGMP manufacturing capabilities.

"I really feel like we're in the midst of a revolution about how we treat diseases," said UVA President Jim Ryan in an April 27, 2023, article in *Virginia Business*.



IMPROVING AI TO BRING MORE EQUITY TO HEALTHCARE

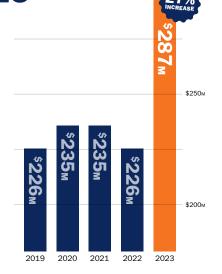
Hospital bedside monitors convey crucial data to artificial intelligence systems, which then assess various health risks, including heart attacks and strokes. But many Al algorithms are built on data from homogenous populations and so cannot accurately predict outcomes for more diverse patient populations.

With a new \$5.9 million National Institutes of Health grant, two University of Virginia researchers will lead the way in improving Al application for a wider diversity of patients: Ishan Williams, PhD, associate professor in the School of Nursing, and Randall Moorman, MD, professor of cardiovascular medicine.

School of Medicine Receives Record-Breaking Research Funding in 2023

The School of Medicine is excited to report that total research awards in its research and clinical departments grew to \$287 million in FY2023—27-percent growth in just one year. The School now represents 54 percent of UVA's total portfolio of research funding.

"We are extremely proud of the growth in our research portfolio and the talented researchers behind exciting scientific advances that make innovative, life-saving medical treatments possible," says Melina Kibbe, MD, dean of the School of Medicine.



SUBSTANTIAL GRANTS BOLSTER RESEARCH AND PROGRAMS TO IMPROVE PATIENT HEALTH

Kevin Pelphrey, PhD-

\$12 million from NIH, one of only nine awarded nationally to an Autism Center of Excellence



Gregory Townsend, MD—more than \$6.4 million annually to support HIV care through the UVA Infectious Diseases Clinic



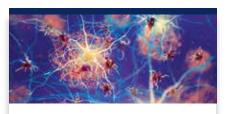
Melissa Little, PhD-

\$5 million from National Cancer Institute for UVA to partner with community pharmacies to help Appalachia residents quit smoking



Emily C. McGowan, MD, PhD— \$3.9 million from NIH to study immunologic response to food proteins in eosinophilic esophagitis





BRAIN DISCOVERY UNLOCKS MYSTERY ABOUT ALZHEIMER'S

Groundbreaking research at UVA's School of Medicine is striving to address one of the most complex medical problems of our age: Alzheimer's Disease. Researchers include:

- · Jianjie Ma, PhD
- · Heather Ferris, MD, PhD
- · George Bloom, PhD
- · Binita Rajbanshi, PhD
- · Ifrah Zawar, MD
- · John Lukens, PhD
- · Hannah Ennerfelt, PhD
- · Harald Sontheimer, PhD

The focus of their labs ranges from metabolic disorders associated with cholesterol and the accumulation of Tau proteins in the brain, to therapies that reverse the effect of aging on the brain. The researchers have received more than \$11 million in total for their work.

Artificial Pancreas Changes Lives of Diabetic Kids

An artifical pancreas developed at the University of Virginia Center for Diabetes Technology improves blood sugar control in children ages 2 to 6 with Type 1 diabetes. The *New England Journal of Medicine* published details of the clinical study and its findings (March 16, 2023). Based on earlier studies, the system was already approved by the FDA for people ages 6 and older with Type 1 diabetes. This study was covered nationally by more than 200 media outlets.

The artificial pancreas uses advanced control algorithms to adjust the insulin dose. "It is rewarding to see our youngest patients, often the most challenging patients to help, benefit as well," says Marc D. Breton, PhD (below), a UVA School of Medicine researcher who served as the trial's principal investigator and was recently honored as UVA's 2022 Innovator of the Year.







Jianhao (Ray) Zeng celebrates with his wife after earning his PhD from UVA's Biomedical Sciences Graduate Program in May. BIMS candidates train to become the next generation of scientific leaders. "The UVA School of Medicine attracts the brightest and most talented learners to our innovative and transformational programs."

Meg G. Keeley, MD Senior Associate Dean for Education

EDUCATION

The UVA School of Medicine is training the next generation of health science professionals and advancing knowledge in the medical sciences through world-class educational programs supported by outstanding and passionate educators.

2022–2023 BY THE NUMBERS

650

medical students

280

graduate program students

90

master's program students

3.86

average GPA for incoming medical students

95th

percentile MCAT scores for incoming medical students

99%

residency match rate

609

residents

184

fellowship trainees

11

ACGME programs nationally ranked in top quartile by Doximity



Students Make a Lasting Difference in the Community

Medical students routinely volunteer with area nonprofits and their own student organizations throughout the communities surrounding both the Charlottesville and Inova campuses. As part of a required Social Issues in Medicine course, they serve groups as varied as children, youth, and those experiencing homelessness. For example, the student-run UVA Homeless Consult Service and the Charlottesville Homeless Health Outreach Program address needs in both inpatient and outpatient settings.



"Our goal is to remove some of the barriers to care so that each member of our community receives equitable healthcare," says Jeff Bellinger, class of 2024.

The Student National Medical Association chapter also regularly hosts events that help children and youth gain a vision for working in healthcare. "It's just so important to teach kids about health and wellbeing and to inspire them to achieve their dreams," says Eoin Bradley, class of 2025.



"It's important to learn from the community you serve, so you can provide the most appropriate support."

Frances Morales, class of 2023

No Shortage of Recognition for UVA Students



Leticia Beltran, PhD candidate in biophysics, Biomedical Sciences Graduate Program, was highlighted in the journal *Cell* as part of its "Faces of Cell" campaign. Beltran published in *Cell* in April 2022. She hopes to partner with underrepresented communities to create a diverse and inclusive lab environment.



Donavon Lea, Master of Public Health Program, received the CDC Public Health Law Fellowship, which prepares fellows for careers in public health law or public policy.



Abby Sacks, Master of Public Health Program, received the Health Communication Fellowship, awarded by the U.S. Department of Health and Human Services. Sacks will help develop and implement communications strategies for publications, social media, and other promotions.



Daria Skwarzynska, PhD candidate in neuroscience, received the Young Investigator Award from the American Epilepsy Society, which recognizes 20 young investigators conducting basic, translational, or clinical epilepsy research. Her abstract was selected from more than 1,300 other submissions.

REAL-TIME ASSESSMENT OF OUR MEDICAL STUDENTS





In the November 2022 issue of Academic Medicine, School of Medicine educators including Meg

Keeley, MD, as first authordescribed the structure and outcomes of the University of Virginia Entrustable Professional Activity program. Implemented in 2017, the program assesses medical students in workplacebased settings on skills that an intern should be able to perform on day one of residency with indirect supervision. To date, more than 113,000 student assessments have been performed by residents, fellows, and faculty across all phases of the curriculum and all clinical educational sites.



Sam Konkol, MD, Laura Mitchell, MD, Chelsea Lau, MD, and Sean Dougherty, MD, served this year as chief residents of the Department of Medicine.

FLAWLESS GME ACCREDITATION, 10 YEARS RUNNING!

For the 10th consecutive year, UVA's Graduate Medical Education program—with 82 individual programs—has been re-accredited by the Accreditation Council for Graduate Medical Education without a single citation. To support its decision, the ACGME reviews data; compiles anonymous survey results from residents, fellows, and faculty; and performs site visits.

"We're held up as an example of an institution that has done things really well for a number of years," says Susan Kirk, MD, associate dean and associate professor in the Department of Medicine. "I have the best staff in the country in terms of graduate medical education."



Taison Bell, MD (in orange)—
associate professor in the School
of Medicine and specialist in
infectious diseases and critical
care—combines his medical
practice with a commitment to
teach and mentor others.

"I am inspired every day by our team's commitment to serve our patients and provide high-quality, compassionate care."

Melina Kibbe, MD Dean, UVA School of Medicine and Chief Health Affairs Officer, UVA Health

CLINICAL

As part of a \$4 billion healthcare enterprise, with 20 clinical departments and more than 1,000 physicians, the School's patient-centered clinical approach is devoted to reshaping medical practice and meeting the health needs of our community and beyond.

2022–2023 BY THE NUMBERS

1st

Newsweek Best Hospitals in Virginia

1st

U.S. News & World Report Best Children's Hospitals in Virginia

42nd

Newsweek Best Hospitals in the U.S.

1,056

hospital beds

51.8_K

procedures performed

62.5k

telehealth engagements

1.9M

ambulatory visits

6

hospitals

50th

Newsweek Best Cancer Hospitals in the U.S.



CNN Features UVA-Developed Technology

CNN chief medical correspondent Dr. Sanjay Gupta visited UVA Health in January 2023 to witness focused ultrasound technology, pioneered by Jeffrey Elias, MD. The visit was for an episode of Gupta's series *Vital Signs*. Focused ultrasound is a scalpel-free brain surgery pioneered at UVA to address essential tremor—a movement disorder that causes uncontrollable shaking. Five years after treatment, researchers report that clinical trial participants continue to see their treated tremors reduced by more than 70



percent. UVA partners with the Focused Ultrasound Foundation to accelerate the development of new applications of focused ultrasound and wide adoption as a standard of care. Elias' work was published in the February 2023 issue of the New England Journal of Medicine.

UVA doctors Joshua Diamond (standing, at left) and Jeffrey Elias interact with a patient being treated for essential tremor.



10,000TH ROBOTIC SURGERY!

In April, the UVA Surgery team completed its 10,000th procedure since 2004 using the robot-assisted surgical system daVinci. "The benefit to our patients has been remarkable," says Noah Schenkman, MD, professor of urology, about the minimally invasive approach. "With daVinci surgery, patients experience less blood loss, pain, and scarring ... [which] leads to less hospital and overall recovery time."

Celebrating 1,000 Stem Cell Transplants

The Cancer Center team completed its 1,000th stem cell transplant in December 2022. According to Karen Ballen, MD (at right), medical director of the Stem Cell Transplantation Program, most of their patients battle blood cancers such as leukemia, lymphoma, and myeloma. The team also uses stem cell transplant for other blood diseases and genetic diseases and is studying its use with autoimmune diseases. "We are also doing research to try to prevent relapse of cancer after transplant," Ballen reports, calling such prevention "the wave of the future" for transplants.



WebMD, Newsweek, and Others Applaud UVA Health



WebMD and **Medscape** recently named UVA Health a "best in class" health system in Virginia for its cancer, heart, orthopedics, neurology, and digestive health care.



In its "World's Best Hospitals 2023" guide, Newsweek ranked UVA Medical Center as the No. 1 hospital in Virginia, in the top 50 hospitals nationally, and in the top 250 hospitals worldwide.



Newsweek also named UVA Medical Center to its list of America's Top Maternity Hospitals for high-quality care of newborns and mothers—for the fourth consecutive year.



U.S. News and World Report recently ranked UVA Children's Hospital as the No. 1 children's hospital in Virginia for the third consecutive year. UVA Children's Hospital ranks among the top 50 of all children's hospitals in 9 out of 10 specialties.



The **PKD Foundation** named UVA Health as a Center of Excellence for its patient-focused, comprehensive care for autosomal dominant polycystic kidney disease (ADPKD). UVA Health is one of only 28 centers nationally to earn this honor.



The Adult Echocardiography Lab at UVA Health's Heart & Vascular Center received the 25-Year Silver Accreditation Milestone from the **Intersocietal Accreditation Commission**. UVA Health is one of just two health providers in Virginia to earn the 25-year accreditation award.



UVA DOCTOR IN NIH 'SHARK TANK' COMPETITION

Jennifer Payne, MD, and colleagues isolated two genes that can help researchers predict whether a new mother will experience depression. Their discovery put them among 12 finalists in a "Shark Tank"-like National Institutes of Health competition seeking ways to improve maternal health. Dionysus Digital Health is developing the test based on the biomarkers. NIH will announce the winners in March 2024, with \$8 million total in prize money.





In a partnership between UVA and the community, middle school students visit the UVA Medical Simulation Center to learn about potential future careers such as anesthesia technician, nurse practitioner, physician, and physician assistant.

"Engaging and serving our local and nationwide community is a privilege and a calling we take seriously."

Tracy M. Downs, MD Senior Associate Dean of Diversity, Equity, and Inclusion

COMMUNITY

UVA School of Medicine focuses on being both great and good—serving our greater community through medical outreach, philanthropy, top-of-the-line clinical practices, and compassion.

2022-2023 BY THE NUMBERS

153

volunteers at Charlottesville Free Clinic

2

School of Medicine campuses

^{\$}183м

charity care

19

Day of Service medical student volunteer events

21

Virginia Health Planning Districts supported

142

community health events

TRAINING TOMORROW'S HEALTHCARE PROFESSIONALS?

Last October, Boys and Girls Club students from the greater Charlottesville area (photo on opposite page) interacted with realistic simulation mannequins—named "Thomas" and "Carlos"—for a day at UVA Medical School Simulation lab. They watched how anesthesia is performed, practiced intubation and suturing, and learned from medical expert panelists—all to enhance their interest in STEM and, ultimately, in healthcare.

The camp was the idea of Perry Bradford, MD, a resident in the Department of Plastic Surgery, Maxillofacial, and Oral Health. According to Brittany Behar, MD, assistant professor in the same department, "I was blown away by their thoughtful questions and their amazing suturing and patient interview skills. I think there may be some future surgeons and anesthesiologists in the group!"



Using Telehealth to Revolutionize Rural Healthcare

The U.S. Department of Agriculture awarded a \$5.1 million grant to the UVA Karen S. Rheuban Center for Telehealth. The center will lead a multi-stakeholder consortium that includes UVA Health, UVA Wise, the Southwest Virginia Health Authority, Ballad Health, the Health Wagon, and Tri-Area Community Health. Funds will be used to improve access to care via telemedicine—such as supporting both a virtual long COVID clinic and Project ECHO programming, which uses Zoom technology to connect UVA specialists with primary care providers in underserved communities. Principal investigators for this grant are Karen S. Rheuban, MD, professor of Pediatrics and co-founder and director of the UVA Center for Telehealth, and Katharine Wibberly, PhD, associate professor of Public Health Sciences and director of the Mid-Atlantic Telehealth Resource Center housed within the UVA Center for Telehealth.

EXPANDING CANCER SCREENINGS FOR UNDERSERVED GROUPS

UVA Comprehensive Cancer
Center is establishing
partnerships with community
health centers, supported by
\$500,000 in grants from the
U.S. Department of Health and
Human Services, to improve
equity in cancer screenings for
the underserved. The partnering
health centers serve all patients,
regardless of their insurance
status or ability to pay.





Reducing Health Inequities for Virginia's Rural Residents

The School of Medicine has launched a new Center for Health Equity and Precision Public Health—to improve the health and well-being of rural residents, the economically challenged, and minority groups across Virginia and beyond. The goal: reduce health disparities and promote health equity.

The center's founding director, Keith L. Keene (at left), will serve in UVA's Department of Public Health Sciences and also as a researcher investigating the interplay among biological, social, and environmental determinants of health disparities in an approach called "precision medicine."

The center's goals align closely with UVA Health's 10-year strategic plan, which aims to cultivate healthy communities, enable discoveries that benefit human health, and ensure that no Virginian needs to leave the state to receive even the most complex care. "I see a future," Keene says, "where we have the ability not to treat individuals with a one-size-fits-all approach, but to tailor our care in ways that take multiple contributing factors into account."

COMMUNICATION BOARD CREATES GREATER ACCESSIBILITY FOR THE NONVERBAL

The American Osteopathic College of Physical Medicine



and Rehabilitation awarded a \$1,500 grant to Emily Hillaker, DO, a chief resident in the School of Medicine's Physical Medicine &

Rehabilitation Department. The grant funded installation of a communication board at a local Charlottesville park—displaying photos, symbols, or illustrations that nonverbal children and adults may use to facilitate communication with each other. Emily applied for the grant on behalf of a local organization that's working to make the park more accessible and inclusive. "These boards send a message to the entire community," Hillaker says, "that this is a space where we want all to feel welcome and included."

Gift to Community Clinic Benefits Vulnerable Neighbors



To honor its physicians and their service to the community, and also to commemorate National Doctors Day in March, UVA Health donated \$30,000 to the Charlottesville Free Clinic. In 1992, two UVA Medical Center residents, now current faculty—Mohan Nadkarni, MD, and Paul DeMarco, MD—co-founded the Charlottesville Free Clinic to provide free, high-quality healthcare to uninsured and underinsured residents. Healthcare professionals, including many from UVA Health, collectively donate more than 14,000 hours of their time annually.

DIVERSITY

The UVA School of Medicine promotes diversity and continues to further its strategic goals of transforming healthcare, erasing disparities, and inspiring hope—regardless of sexual orientation, gender identity, or disability.

2022-2023 BY THE NUMBERS

female faculty

6.5%
URIM* faculty

48%

16%

female trainees

URiM* trainees

67%

20%

female graduate students

URiM* graduate students

53% female medical

students

23%

URiM* medical students

UVA Trainees Promoting Equity in Medicine

UVA's fifth annual Trainee Diversity and Inclusion Conference last November included 86 participants from 20 different institutions. Keynote speaker Bonnie Mason, MD, FAAOS (at center, in group photo below), encouraged participants to change systems and strive for equity. Mason is an orthopedic surgeon and medical director of diversity, equity, and inclusion at the American College of Surgeons. The conference's panel discussions also covered topics such as career development, mentoring, and systems and culture change.





Emerging Leaders Push the Boundaries of Biomedical Engineering

The Department of Biomedical **Engineering** held its inaugural **Emerging Leaders in Biomedical** Engineering symposium last November, with presenters from UVA and other institutions across the country. The symposium showcased innovations that are "revolutionizing how discoveries in the lab translate to novel biotechnologies ... and gave an impressive and inspiring view of where the field is heading and the tremendous impacts it will have in the years to come," according to Shayn Peirce-Cottler, PhD, BME department chair.



"We want to make everyone feel welcome, do our best to provide great care, and be respectful of each individual."

Tracy M. Downs, MD Senior Associate Dean for Diversity, Equity, and Inclusion



Abolishing Disability Injustice

In May, the New England Journal of Medicine published an editorial coauthored by Rupa S. Valdez, PhD (at left), associate professor of Public Health Sciences, that outlines how to overcome the health disparities faced by people with disabilities. The authors are asking the NIH, and agencies such as the Centers for Disease Control and Prevention, to formally categorize people with disabilities as a health disparity population. They report that such a designation will prompt important research to quantify and mitigate the complex factors that contribute to poor health outcomes.

PEOPLE

As they align with team leadership in a culture of respect, well-being and advancement, the School's distinguished faculty, trainees, and staff are regularly recognized for their excellence and innovation—pursuing strategic growth on a foundation of success.

2022–2023 BY THE NUMBERS

1,298

AGE 2

208

endowed professors

97%

faculty applicants promoted

UVA Faculty Leading the Way

Across the board, UVA School of Medicine faculty have been elected to prestigious roles in medical societies and publications, and recognized by media outlets for their expertise. From those critical vantage points, they significantly influence the national conversation.

Shaping the Dialogue as Editors-in-Chief of Top Journals



Andrew Dudley, PhD
Angiogenesis



Jay Fox, PhD



Mikel Gray, PhD
Journal of Wound,
Ostomy and Continence



Ziv Haskal, MD International Journal of Gastrointestinal



Brant Isakson, PhD Journal of Vascular Research



Melina Kibbe, MD JAMA Surgery



Li Li, MDFamily Medicine and
Community Health



Mark Miller, MD Clinics in Sports Medicine



Jason Papin, PhD PLOS Computational Biology



Vanessa Shami, MD Clinical Endoscopy



Jason Sheehan, MD Journal of Neuro-Oncology



Nearly 100 faculty celebrated their promotions in 2023.

"The achievements, innovations, and service of the UVA School of Medicine would be impossible without its stellar people."

Susan M. Pollart, MD, Senior Associate Dean for Faculty Affairs and Faculty Development

Providing Leadership to Influential National and International Societies and Foundations



Todd Bauer, MD
President, Society of
Clinical Surgery



President, American Association of OBG Foundation



Jim Gorham, MD, PhD
President, Association for
the Advancement of Blood &
Biotherapies Foundation



Kirsten Greene, MDPresident, Society of Academic Urologists



Ann Kellams, MDPresident, Academy of
Breastfeeding Medicine



Melina Kibbe, MD President, Surgical Biology Club II



Mark Miller, MD
President, American
Orthopaedic Society for
Sports Medicine



Mohan Nadkarni, MD
President, Association
of Chiefs and Leaders in
General Internal Medicine



Michael Nelson, MD, PhD President, American Board of Allergy and Immunology



Jennifer Payne, MD
President, Marcé of North
America Perinatal Mental



Jennifer Kim Penberthy, PhDPresident, Society of Clinical
Psychology



Mitchell Rosner, MD Global Director for the Americas, Royal College of



Laura Shaffer, PhD
President, Association of
Psychologists in Academic
Health Centers



Jason Sheehan, MD Chair, International Radiosurgery Research Foundation



Allan Tsung, MD President, Society of Asian Academic

Pioneers of National Guidelines



Andrew Southerland, MD, and his team from the UVA Comprehensive Stroke Center (Rohini Bhole, Nina Solenski, Joseph Donahue, Ryan Kellogg, Necrisha Roach, Sherita Chapman, Bradford Worrall, Avery Evans, Sohil Patel, Sugoto Mukherjee, Min Park) responded to supply chain shortages during the COVID-19 pandemic by establishing new parameters and best practices for treating stroke patients.



Alden Doyle, MD, chaired the committee that created a new simultaneous heart-kidney and lung-kidney allocation policy for UNOS (the United Network for Organ Sharing). This policy will improve equity in access to transplant for both multi-organ and single-organ patients.



Maria Luisa Sequeira Lopez, MD, served as senior author on a scientific statement from the American Heart Association, which addressed the long-term cardiovascular health of women with complicated pregnancies and their affected offspring.





Two sets of clinical guidelines were established for the American College of Gastroenterology: one by **Vanessa Shami, MD**, senior author on approaches to patients with tumors, cysts, or other structures that compress the gastrointestinal wall; another by senior author **Andrew Wang, MD**, along with co-authors Bryan Sauer, and Elaine Attridge, on evaluating abnormal narrowing in the liver's ductal drainage system.

UVA Faculty Leading the Way (continued)

Recipients of Noteworthy National Awards

National Distinctions



Edward Egelman, PhD
Fellow, American
Association for the
Advancement of Science



John Hossack, PhD Fellow, National Academy of Inventors

Educator Awards



Michael Ayers, MD W. Proctor Harvey, MD Young Teacher Award, American College of Cardiology



Jamieson Bourque, MD
Outstanding Educator
Award and Lectureship,
Society of Nuclear
Medicine and Molecular
Imaging



Vanessa Shami, MD Distinguished Educator Award, American Society for Gastrointestinal Endoscopy



Catherine Varney, DO Steelman-Seim Educator Award for Excellence in Academics, Obesity Medicine Association

Lifetime Achievement Award



Ziv Haskal, MD Gold Medal, Society of Interventional Radiology

Early Career Awards



Heather Bruschwein, PsyD Outstanding Early Career Psychologists Contributions Award, Association of Psychologists in Academic Health Centers



Jaeda Coutinho-Budd, PhD Jordi Folch-Pi Award, American Society for Neurochemistry



Mohammad Fallahi-Sichani, PhD Rising Star Award, Biomedical Engineering Society Cell and Molecular Bioengineering



Ahmad Jomaa, PhD Searle Scholar, Kinship Foundation



Natasha Sheybani, PhD Ralph E. Powe Junior Faculty Enhancement Award, Oak Ridge Associated Universities



Joanna Yost, PhD Excellence in Clinical Health Psychology by an Early Career Professional Award, American Psychological Association



Ifrah Zawar, MD Grass Foundation Young Investigator Award, American Epilepsy Society

Outstanding Innovation, Leadership, and Achievement Awards



Anne Kenworthy, PhD Mildred Cohn Award in Biological Chemistry, American Society for Biochemistry and Molecular Biology



Susan Kirk, MD
Parker Palmer Courage
to Lead Award,
Accreditation Council
for Graduate Medical
Education



Lynn Kohan, MD
Presidential Scholar
Award, American Society
of Regional Anesthesia
and Pain Medicine



Irving Kron, MD Scientific Achievement Award, American Association for Thoracic Surgery



Becca Krukowski, PhD Leading the Narrative Award, Society of Behavioral Medicine



Amy Mathers, MD Cotlove Lectureship, Academy of Clinical Laboratory Physicians and Scientists



Victoria Norwood, MD Founders' Award, American Society of Pediatric Nephrology Award, American Epilepsy Society



William Petri, MD, PhD Walter Reed Medal, American Society of Tropical Medicine and Hygiene



Susan Pollart, MD Carole J. Bland Phronesis Award, Association of American Medical Colleges



Brian Weinshenker, MD
Giants of Multiple Sclerosis,
NeurologyLive™ and the
Consortium of Multiple
Sclerosis Centers



Bhavana Yalamuru, MD
Presidential
Commendation,
American Academy of
Pain Medicine

Service Awards



Janet Cross, PhD Clifford J. Vogt, MD '34 Award by Case Western Reserve University School of Medicine



P. Preston Reynolds, MD, PhD
President's Award of
Excellence, Academy for
Professionalism in Health Care

Mentoring Awards



Bobby Chhabra, MD David P. Green Mentorship Award, American Society for Surgery of the Hand



Karen Warburton, MD Midcareer Distinguished Mentor Award, American Society of Nephrology

Capturing National Media Attention



Anelyssa D'Abreu, MD—Wrote an article for *The Conversation* on links between a sleep disorder and dementia, which was picked up by more than 100 news outlets



Mark DeBoer, MD—Interviewed by the *Washington Post* about age-appropriate chores for children



Edward H. Egelman, PhD—Published in *Science* about a breakthrough discovery on the use of DNA to engineer materials that might revolutionize electronics





Kyle Enfield, MD, and Ina Stephens, MD—Spoke at a congressional briefing about advanced care for patients with long COVID. Enfield also wrote on the topic for *The Conversation*, which was picked up by more than 150 news outlets



Mariano Garcia-Blanco, MD, PhD—Research into dengue fever covered by *U.S. News & World Report* and more than 150 other news outlets



Max Luna, MD—Interviewed for a story on why some Latinos are hesitant to perform CPR, which was picked up by more than 100 outlets, including *U.S. News & World Report*



Amy Mathers, MD—Testified before Congress on antimicrobial resistance and wrote an op-ed based on her testimony, published in *Richmond Times-Dispatch*



Kathleen McManus, MD—Quoted by CNN and more than 100 media outlets about the impact of insurance companies' prior authorization requirements



Harish Narasimhan, PhD candidate in the Biomedical Sciences Graduate Program—Published in *The Conversation* about long COVID stemming from an overactive immune response in the lungs; the story appeared in more than 100 media outlets nationally



Jennifer Payne, MD—Quoted in *U.S. News & World Report* and more than 200 other media outlets about her research into premenstrual mood swings and anxiety



Kevin Pelphrey, PhD—Interviewed by the *New York Times* about the growing rate of autism in girls



Julia Scialla, MD—Researched healthy eating for kidney health, which appeared in more than 100 outlets, including *U.S. News & World Report*



Kenneth Walsh, PhD—Discovered how the loss of the Y chromosome can lead to shorter lifespans for men, which was covered in hundreds of outlets, including the *New York Times*

ALUMNI

The University of Virginia School of Medicine is grateful for the active and growing community of the UVA Medical Alumni Association and Medical School Foundation, which strengthens connections and provides support to alumni, students, staff, and faculty.

2022–2023 BY THE NUMBERS

\$4.8_M

foundation endowment distributions

\$9.2_M

alumni giving

\$2.5_M

foundation support for scholarships

Honoring Our Medical School Alumni

School of Medicine alumni joined in a variety of celebrations in 2023, including the Biomedical Sciences Graduate Program (BIMS) reunion and Medical School Reunion Weekend. The UVA Medical Alumni Association's 2022 award recipients were honored at these events, which drew more than 400 people back to UVA Grounds.

Alumni also gathered outside Charlottesville this year, participating in a student-alumni networking event at UVA Medicine's campus in Northern Virginia, and at regional events in Norfolk, Richmond, and Durham.



Meeting Dr. Vivian Pinn was a highlight for students at the Pinn College networking event in Northern Virginia. Dr. Pinn—a pathologist and retired director of the NIH's Office of Research on Women's Health—was both the only African American and the only woman in the UVA School of Medicine Class of 1967.

DIVERSITY, EQUITY, AND INCLUSION INITIATIVES APPLAUDED



The UVA Medical Alumni Association received the AAMC's Honorable

Mention Award for Excellence in Diversity, Equity, and Inclusion Initiatives. The award recognized the inaugural Black Medical Alumni Weekend, held in 2022.



Alumni enjoy connecting with classmates at the Medical School Reunion Weekend.

"The alumni of the UVA School of Medicine daily live out their guiding values of excellence, respect, and service."

Barry Collins, Associate Dean for Medical Alumni Affairs



The Medical Alumni Association honored 2022 award recipients: (back row) James E. (Jef) Ferguson, MD (Walter Reed Distinguished Achievement Award); Jennifer Kawwass, MD '07 (MD Early Achievement Award); Pat McManus, MD '85 (Outstanding Medical Alumnus); (front row) Nima Mosammaparast, MD '06, PhD '05 (Early Achievement Award in Biomedical Sciences); and Stephen Waggoner, PhD '07 (Distinguished Achievement Award in Biomedical Sciences).



IN MEMORIAM

Richard MacKay, MD '73, posthumously received the 2022 Humanitarian Award from the UVA Medical Alumni Association. MacKay chose government service over private practice, dedicating his life to providing quality medical care to the marginalized—in locations ranging from a Navajo Reservation in Arizona to a Peace Corps assignment in East Africa. His award was accepted by his wife, Donna Florio, at the Medical School Reunion Weekend.

PHILANTHROPY

Philanthropy to the School of Medicine and UVA Health in FY2023 totaled \$181 million, the highest amount in the School's history. This support advances the School's mission, places it at the forefront of research and innovation, provides generous scholarships to promising students, and enables the recruitment of world-class faculty and staff.

2022–2023 BY THE NUMBERS

17

endowments

7,057

8,667
donors



Revolutionary Givers

Paul and Diane Manning's \$100 million contribution kickstarted what will become the UVA Paul and Diane Manning Institute of Biotechnology.

The couple has long supported UVA Health's research efforts. Although neither attended the University, they moved to the area because of the medical center's reputation and some family medical needs. Now they are committed to moving technology forward in the medical field.

"Our goal is to have the best possible medicine—next-generation medicine—for the residents of Virginia and people around the globe," Paul Manning told *UVA Today* in January.

Generous Gift Supports Promising Pancreatic Cancer Research



Peter Farrell, left, with Todd Bauer, MD, chief of the division of Surgical Oncology.

In honor of the late Thomas F. Farrell II

(Col '76, Law '79), former rector of the UVA Board of Visitors, members of the Farrell family made a significant new commitment to create the Farrell Family Fund, which supports pancreatic cancer research at UVA Cancer Center. The fund was created by Farrell's wife, Anne Garland (Ed '77), sons Peter (Col '06) and Stuart (McIntire '07), daughter-inlaw Mary (Col '07), and brother Timothy (Col '78). A large portion of the gift will support work in the lab of Todd Bauer, MD, a leading researcher of pancreatic cancer who started the UVA High-Risk Pancreatic Cancer Screening Clinic in 2012. Two other investigators doing novel work in pancreatic cancer at UVA will also be funded: Kimberly A. Kelly, PhD, a biomedical engineering professor at UVA's School of Engineering and Applied Science, and Larry Lum, MD, and his colleagues in the UVA Cancer Center.

NEED-BASED SCHOLARSHIPS CHANGE THE FACE OF MEDICINE

To continue attracting the best and brightest future physicians to UVA's School of Medicine through need-based scholarships, Norman T. Soskel, MD, FACP, FCCP (Col '70, Med '74, Res '77) and Judith A. Barrie have generously established the Norman T. Soskel and Judith A. Barrie Medical School Scholarship Fund.

GIVING BIOTECHNOLOGY A BOOST

Through a generous gift from William G. Crutchfield Jr. (McIntire '65), the Crutchfield Family Research Fund will benefit critical research efforts at the Paul and Diane Manning Institute of Biotechnology. Dr. Maggie Cook (Col '95) and Will Cook (Col '95) also pledged significant support to emerging initiatives at the Manning Institute by establishing the Cook Family Biotechnology Institute Fund.

"Supporting the School of Medicine is building a better future for all."

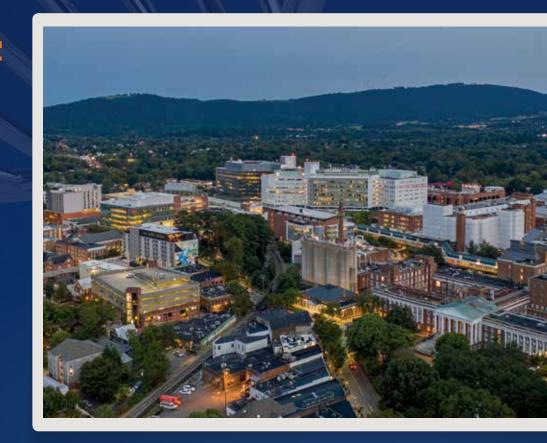
Amy S. Karr Senior Associate Vice President, UVA Health Development

FINANCIAL

The University of Virginia School of Medicine is building the future through financial stewardship.

"Our highest-ever consolidated revenue of \$1.2 billion for fiscal year 2023 is a powerful investment in the School of Medicine's successful future."

Jeremy Sibiski Chief Operating Officer



OVER LAST 5 YEARS

28%

increase in net patient service revenue

19%

increase in scholarship/ fellowship support

15%

increase in research revenue

Synergy Drives Greater Financial Success

In 2023, the School of Medicine consolidated its revenue cycle process across all of UVA Health. This resulted in more than double prepaid collections and an increase of 35 percent in pre- and post-point-of-service collections. Improved revenue cycle performance across the enterprise will drive future financial success and simplify patient care by everyone using the same Epic (electronic health portal) platform.

SCHOLARSHIP & FELLOWSHIP SUPPORT PROVIDED



PAGE 28

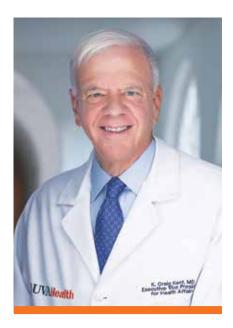


REVENUE TRENDS

Includes practice plan revenue generated by UVA Physicians Group



LEADERSHIP



"We created the strategic plan with the goal of making UVA Health the nation's leading public academic health system."

K. Craig Kent, MD

The field of medicine is evolving rapidly, and at UVA Health we are at the forefront of this transformation. In this annual report, we proudly share clinical advancements and discoveries that are reshaping healthcare, not only in Virginia but across the world.

Over the past year, UVA Health has expanded and is now inclusive of the University Medical Center, the UVA School of Medicine, the UVA School of Nursing, University Physician's Group, UVA Community Health in northern Virginia, UVA Community Health Medical Group, a partial interest in Riverside Health (a five-hospital system in eastern Virginia), and the Claude Moore Health Sciences Library.

The UVA School of Medicine serves as the backbone for UVA Health. Our school is integral to achieving the multiple goals of our recently launched 10-year strategic plan and is a catalyst for clinical excellence, innovative research, and education of the next generation of healthcare providers. I'm excited to share the progress we have made in our ongoing expansion to drive transformative care, innovative research, educational excellence, and our vision for the future.

UVA Health recently purchased an interest in Riverside Health System, marking a significant step in providing eastern Virginians with access to cutting-edge care, clinical trials, and educational programs. Our initial emphasis will be in the areas of transplantation and cardiac and thoracic surgical care. We are proud that UVA health-care will now be accessible to the 2 million people who live in this important part of the Commonwealth of Virginia.

Our flagship Medical Center in Charlottesville continues to flourish, and the demand for our services is expanding. We are a major 700-plus bed tertiary/quaternary care center that receives referrals from throughout Virginia and beyond. With our new statewide presence, there is considerable demand for our services. As evidence of this growth, our surgical volumes have increased an impressive 30 percent over the past three years.

UVA Health's momentum will continue with the development of the Paul and Diane Manning Institute of Biotechnology—a new 350,000-square-foot research facility focused on translational research. Featured as part of this institute will be a biomanufacturing facility and support for a statewide clinical trials network. By translating research discoveries into groundbreaking treatments and superior patient outcomes, UVA Health will provide truly differentiated care for many complex medical conditions.

As a system, we continue to focus on creating a culture that leads to UVA Health being the workplace of choice. We have made strides in stabilizing our staffing and are proud to report our physician and faculty turnover rates have continued to remain significantly lower than the national average. Additionally, the staffing turnover rate in our clinical operations is also significantly below the national average, and our nursing turnover rate has returned to pre-pandemic levels. We are proud of our focus on culture that has led to these amazing outcomes.

In the coming decade, we anticipate significant changes in healthcare. As an academic health system, our vision is to lead this transformation, ensuring that healthcare evolves to meet the needs of all Virginians and beyond. We look forward to a bright future.

With deep gratitude,

K. Craig Kent, MD

Chief Executive Officer, UVA Health

Executive Vice President of Health Affairs, University of Virginia



Modern Healthcare
magazine named
Wendy Horton, CEO
of the UVA Medical
Center, to its 2023
list of Top 25 Women
Leaders in Healthcare.

Modern Healthcare 25 Women Leaders

At the UVA Health University Medical Center, we witness miracles every day. This is one of the greatest benefits and most rewarding experiences of being part of a leading academic health system: our ability to translate research discoveries into lifesaving care.

It's such an honor and a privilege to lead our talented team members, who work together to create exceptional patient experiences. And it shows in our national reputation—such as *U.S. News & World Report*'s ranking of UVA Health Children's as the No. 1 children's hospital in Virginia for the third consecutive year.

In this annual report, you will discover inspiring stories of significant achievements that have a direct impact on patient care. These include the development of an artificial pancreas to treat diabetes, groundbreaking research in the field of autism, and the innovative use of telehealth to expand healthcare to rural communities. Our unwavering commitment to quality is at the core of our mission, ensuring that every patient's experience is a positive one. These efforts align seamlessly with our 10-year strategic plan, which is driving the expansion of our quality of care and enhancing patient outcomes at the University Medical Center.

As you explore this annual report, you will see our vision come to life: to be the nation's leading public academic health system and best place to work—while transforming patient care, research, education, and engagement with the diverse communities we serve.

We're excited to see what the next year holds. Join us in looking forward to an incredibly promising future of unlimited potential.

Take care and be well,

Wendy Horton, PharmD, MBA

Chief Executive Officer, UVA University Medical Center

Leaders at the School of Medicine are shaping a unified future.

ADMINISTRATION



Melina Kibbe, MD



Senior Associate Dean for Faculty Affairs & Faculty Development



Meg Keeley, MD Senior Associate Dean for Education



Senior Associate Dean for Diversity. Equity & Inclusion



Senior Associate Dean for Research



Chief Operating Officer



Chief of Staff



Associate Dean for Finance & Administration

CLINICAL DEPARTMENT CHAIRS



Peggy McNaull, MD Anesthesiology



Brian Hoard, DDS Dentistry



Barrett Zlotoff, MD Dermatology (interim)



Andrew Muck, MD Emergency Medicine effective September 15



Family Medicine



Mitchell Rosner, MD Medicine



Howard Goodkin. MD. PhD Neurology



Mark Shaffrev. MD Neurosurgery



Paola Gehrig, MD Obstetrics & Gynecology



Peter Netland, MD, PhD Ophthalmology



Bobby Chhabra, MD Orthopaedic Surgery



Stephen Park, MD Otolaryngology



Christopher Moskaluk, MD, PhD Pathology



Pediatrics effective December 4



Physical Medicine & Rehabilitation



Scott Hollenbeck, MD Plastic Surgery



Anita Clayton, MD Psychiatry & Neurobehavioral Sciences



James Larner, MD Radiation Oncology

RESEARCH DEPARTMENT CHAIRS



Alan Matsumoto, MD Radiology & Medical **Imaging**



Allan Tsung, MD Surgery



Urology



Kirsten Greene, MD

RESEARCH CENTER DIRECTORS



Anja Bielinsky, PhD Biochemistry & Molecular Genetics



Shayn Peirce-Cottler, PhD Biomedical Engineering



Doug DeSimone, PhD Cell Biology



Mariano Garcia-Blanco, MD, PhD Microbiology, Immunology, & Cancer Biology



Public Health Sciences



Coleen McNamara, MD Beirne B. Carter Center for Immunology Research



Tom Loughran, MD Cancer Center



Boris Kovatchev, PhD Center for Diabetes



Ling Qi, PhD Molecular Physiology & Biological Physics effective September 1



Harald Sontheimer, PhD Neuroscience



Doug Bayliss, PhD Pharmacology



Center for Membrane and Cell Physiology



Charles Farber, PhD Center for Public Health Genomics



Gary Owens, PhD Robert M. Berne Cardiovascular Research Center

OUR VISION

To be the nation's leading public academic health system and best place to work, while transforming patient care, research, education and engagement with the diverse communities we serve.

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