PULSE

UVA Health

PHILANTHROPY IN ACTION
FALL 2019 | VOL 26, ISS 1

Honor the Future

The Campaign Issue

FALL 2019, VOL 26, ISS 1

Dear Friends,

IN AUGUST I ATTENDED the School of Medicine's White Coat Ceremony and Convocation, where Dean David Wilkes welcomed 156 students of the Class of 2023. I was inspired by this incredible group of new medical students taking on the biggest challenge of their lives. Their passion, focus, excitement, and courage was contagious.

There are many special moments across UVA Health like this one—the pinning ceremony for nursing students, cancer patients completing a final round of chemotherapy, breakthroughs in the lab that lead to new treatments, or a reunion of former NICU babies who are now growing and thriving.

It's moments like these that change lives, and we're in the business of facilitating philanthropy to make them possible. This October, the University launched a capital campaign—Honor the Future, The Campaign for the University of Virginia—to advance groundbreaking research, world-class patient care, and innovative nursing and medical education that will impact lives across the Commonwealth and nation.

I am honored that our Health System and University leadership has entrusted me to lead UVA's campaign efforts. Great leaps in medicine and nursing are possible during a capital campaign, and I am excited to see what we can achieve together in the coming months and years. Thank you for being a part of this journey.

All the best,

Amy S. Karr
Executive Director, UVA Health Foundation
Senior Associate Vice President, UVA Health System Development

To share your story, give feedback, or subscribe to the digital version of *PULSE*, please email us at pulse@virginia.edu.

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ANSWERS WITHIN REACH

Honor the Future, UVA's capital campaign, kicks off in October of 2019.

AN IDEA IS NOT ONLY AN IDEA—it's an answer, a breakthrough, the spark of comfort and hope. Over the last decade, UVA Health has pioneered some of the best medical and nursing ideas in the world.

We've made fundamental discoveries in cancer, cardiology, and neurology that have led to new standards of care for patients everywhere. We're building our strengths in precision medicine and the neurosciences by collaborating across disciplines. All the while, we care for every patient who comes through our doors because we are committed to providing the complex, specialty care needed, no matter the barriers.

Ideas also spur action.

Because students thrive when exposed to diverse experiences, UVA developed a next-generation medical curriculum that puts first-year students in clinics and patients' homes. Our nursing school recognized that compassion and resiliency are essential to care, and launched programs to protect against caregiver burnout and medical errors.

Around the Commonwealth, the nation, and the world, we see people, families, and communities without the solutions they need, unable to navigate the journey ahead of them.

This is where *Honor the Future* comes in.

This bold capital campaign will make huge leaps in scientific discovery possible. Working together, we will deliver better care, drive innovation, and unlock new treatments that will lead to a cure.

It's time to foster a new generation of leaders, to accelerate our very best ideas and put them into practice every day, for every patient. Join us as we take on the healthcare challenges of our time.

Together, we'll find the answers we need. ■

SANJAY SUCHAK

RESEARCH
PUTTING THE RIGHT PEOPLE IN PLACE

Dr. José Oberholzer directs the Strickler Transplant Center at UVA.

What does it take to build groundbreaking research programs that will change how we deliver care to patients now and in the future? We must be able to recruit and retain star investigators and physician-scientists who believe that cures for devastating illnesses are within reach.

THE FUTURE OF TRANSPLANT MEDICINE

In 1995, UVA Medical Center only performed kidney transplants. Today, we are the only comprehensive transplant program in Virginia with six cutting-edge transplant programs. This growth has attracted some of the best doctors from around the world.

Chief among them is Dr. José Oberholzer, the Charles O. and Judith S. Strickler Professor in Transplant Surgery, who directs the Strickler Transplant Center at UVA. Oberholzer has performed more than 1,000 transplant-related surgeries and is an expert in using robotic technology to perform kidney transplants. His minimally-invasive approach not only speeds recovery, it allows UVA to conduct transplants on patients who, in years past, would not have been eligible for the operation.

But the future of transplant medicine, says Oberholzer, lies within the cell, not the organ—and this novel approach shows great promise for curing Type 1 diabetes. By transplanting insulin-producing islet cells into a person with Type 1 diabetes, he helps patients slowly wean themselves off of insulin. It's the first of many targeted cellular therapies that can make the need for transplantation—with its serious and long-lasting side effects—obsolete.

"Cellular therapies transform patients' lives," says Oberholzer. "Seeing these promising results keeps you going in the lab, and keeps you motivated to push for the next generation of research."

PREVENTING DISEASE BEFORE IT STARTS

Many diseases are hereditary, passed down from one generation to the next through our DNA. Not long ago, researchers developed the ability to identify genetic mutations in our DNA that cause diseases to form. New technology was invented that enabled scientists to edit, and in some cases remove and replace, the specific gene in question in order to prevent disease.

While this technology, called CRISPR, signals a major leap forward in the scientific community's ability to prevent disease, it does not come without side effects—mainly unintended damage to DNA elsewhere in the cells.

Mazhar Adli, an associate professor in the Department of Biochemistry and Molecular Genetics, is improving the CRISPR technology so that it does not cause extensive DNA damage.

"If you think about your genetic information as a library full of books, what we're doing is going to a specific book and editing, for example, the 5th word on the 3rd page," says Adli. "And our new technique lets us do this in a much more sensitive way than earlier techniques, which were far less precise."

Mazhar Adli's genetic research is upending how we think about disease.

UVA's expertise with CRISPR shows great promise for the treatment of a variety of diseases like cystic fibrosis and hemophilia. Adli is also utilizing the power of CRISPR technology to screen thousands of genes—a move that could explain why some ovarian cancers and pancreatic cancers are resistant to chemotherapy.

MAPPING THE HEART

When it comes to the cardiovascular system, waiting to respond to an illness isn't good enough. To save lives, we need to predict which patients are at risk of a catastrophic event before it happens, and prevent it.

Fortunately, UVA cardiologist Dr. Christopher Kramer is compiling the foundational data that will enable doctors around the world to do just that.

For the last three years Kramer has been collaborating with researchers at Oxford University to build a registry of nearly 3,000 patients who live with Hypertrophic Cardiomyopathy (HCM)—a thickening of the heart muscle that can hinder blood flow, and that can even lead to sudden death from abnormally fast heart rhythms. In fact, it is the most common cause of death in young athletes.

"When we see the patients included in this study, we utilize a host of novel imaging approaches like MRI and blood biomarkers to paint a better visual image of the heart, and we also look at genetic information," says Kramer, who also leads UVA's Cardiovascular Imaging Center.

The data that Kramer and his colleagues compiled through this process revealed two subgroups of HCM patients, who have differences in both the genetics and appearance of their thickened heart muscle.

"After only a few more years we will hopefully be in the position to develop a model, using the baseline data from this study, to predict sudden cardiac death and other cardiac causes of death in these patients," says Kramer. "Once we better understand the risk factors for these events, therapies such as implantable defibrillators and novel medications could be used for prevention." ■

Dr. Christopher Kramer is chief of the Division of Cardiovascular Medicine at UVA.

Behind the Scenes, People Matter

ATTRACTING AND RETAINING extraordinary faculty—and giving them the resources they need to succeed—is key to discovering new frontiers in medicine and nursing. Endowed gifts help us do this. These long-term investments support professorships, faculty funds for excellence, and research funds. Endowed gifts make an indelible impact on UVA Health and jumpstart groundbreaking research that will save lives.

PATIENT CARE
FROM BENCH TO BEDSIDE

From left to right: Dr. Larry Lum, Dr. Trey Lee, and Dr. Craig Slingluff.

UVA has made fundamental discoveries in cancer, cardiology, and neurology that are now the standards of care for patients worldwide. Clinical trials and programmatic support help us put our best ideas into practice, every day for every patient, when and where they need it.

REVOLUTIONARY CANCER CLINICAL TRIALS

Cancer cells often hide and remain undetected from the body's own defenses. But an immune system that's given new tools to fight cancer would not only fight the disease on its own, it would save the patient from some therapies' toxic side effects.

Cancer-fighting immunotherapy offers new hope for patients battling pancreatic cancer—a disease with only an 8% survival rate. Conventional chemotherapy for metastatic pancreatic cancer is often not effective. However, immunologist Dr. Larry Lum's successful Phase I clinical trial that directs T cells to pancreatic cancer tumors helped patients in the trial live longer. Now he hopes to create a therapy that will fight tumor growth beyond the course of treatment, all while maintaining patients' quality of life.

In other labs, Dr. Trey Lee and his team are pioneering cellular therapies that have shown to be particularly effective for childhood cancers, while Dr. Craig Slingluff and his team are conducting clinical trials that utilize immunotherapy through vaccination to combat melanoma and other cancers. These trials are often a patient's best hope, and many are administered on an outpatient basis.

"The best cancer institutions in the country combine excellent clinical care, clinical research, and basic science research, and they invest in the support infrastructure needed to run these programs well and treat very complicated patients," concludes Lee. "UVA is part of that group."

LIVING WITH DEMENTIA

In recent years, researchers have made significant progress in isolating the causes of dementia, a condition that impacts about 50 million people worldwide. Yet there's no denying that many challenges to providing excellent patient care remain.

That's where Dr. Carol Manning comes in. Manning, who directs the UVA Memory and Aging Care Clinic (MACC), helps her patients create roadmaps for successfully managing their conditions. What's more, the MACC offers caregivers hands-on support at every turn.

One of the MACC's flagship programs is Dementia Care Coordination. Launched in 2016 with grant funding, this program was quickly recognized as a model for the state and received an Aging Innovations Award by the National Association of Area Agencies on Aging.

"It's this program that I am convinced has changed my life and given me a way to go forward," says Mary Ann Leeper, who, two years ago, received a diagnosis of mild cognitive impairment—putting her at significant risk for dementia.

The MACC is a unique specialty clinic because UVA experts are working to help their patients in the lab and the clinic. Patients are seen by a multidisciplinary team of highly specialized providers who offer individualized care for dementia and other cognitive disorders. Meanwhile, behind the scenes, investigators work to develop novel treatments through clinical trials.

Dr. Carol Manning directs UVA's Memory and Aging Care Clinic.

TINY PATIENTS, BIG RESILIENCE

An incredible amount of neurological development occurs in the earliest years of life. Sometimes, that development is dependent on the earliest minutes.

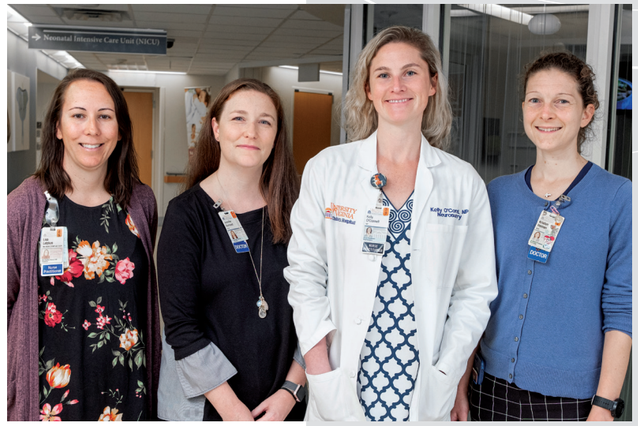
Fortunately no case is too small for UVA Children's neuro-neonatal intensive care unit (neuro-NICU). The only one of its kind in Virginia, the program began in 2014 and is comprised of a core, interdisciplinary team of six specialists: Dr. Jennifer Burnsed (NICU); Dr. Kristen Heinan (neurology); Lisa Letzkus, NP (developmental); Kelly O'Connell, NP (neurosurgery); and Dr. Santina Zanelli (NICU).

"We meet weekly as a multidisciplinary group, every specialist in one room," explains Burnsed, co-director of the neuro-NICU. "We have input from all the specialties, ensuring both comprehensive care and the continuity of care. Often we meet these families prenatally, and care for the babies throughout their neuro-NICU stay, then in the clinics throughout their childhood."

The majority of neuro-NICU patients fall into one of two groups—those with a brain injury, and those with a neurologic anomaly or disease. Many come for UVA's therapeutic hypothermia program. This therapy cools babies to a lower-than-normal body temperature to slow and reduce hypoxic ischemic brain injury, which occurs when the brain doesn't receive enough oxygen or blood flow for a period of time.

"We don't just provide acute, neuro-critical care," Burnsed says. "We also focus on providing an ideal environment for neurodevelopment, which can be difficult in the ICU. We are particularly interested in interventions that get parents involved in promoting both bonding and optimal neurodevelopment.

"The main reason we created the neuro-NICU was for clinical care, but I'm especially excited by the research and educational opportunities that have also arisen out of this collaboration." ■



Members of the Neuro-NICU team, from left to right: Lisa Letzkus, Dr. Jennifer Burnsed, Kelly O' Connell, and Dr. Kristen Heinan.

Caring for Patients with Skill and Compassion

HOW DO YOU DEFINE EXCEPTIONAL care? Patients thrive under the care of nurses and physicians who are specialists in their fields, and they benefit from access to innovative treatments, many of which come from UVA's laboratories. They find hope from clinical trials that are offered close to home, where they can receive support from family and friends. Your generosity helps UVA Health put patients at the center of care—giving us the power to design and deliver personalized treatments in settings that promote health and peace.

EDUCATION
PREPARING THE NEXT GENERATION

Long before a star researcher's discovery turns the scientific community on its head, that researcher is a student. Training the next generation of nurses, doctors, and researchers is an essential part of the pursuit of new knowledge. Supporting students with scholarships and fellowships is an invaluable gift to promising young minds.

NURSING REDEFINED

UVA School of Nursing's Certified Nurse Leader (CNL) program is graduating a new type of nurse—individuals who are prepared to dramatically improve how nursing care is delivered.

The CNL program is the first of its kind in Virginia, and is ranked third in the nation. After they graduate, many of these nurses often rise quickly into leadership and management positions.

Many CNL students are also career switchers who bring a wide variety of experiences to the field. However, because most CNL students come to nursing later in life, they are presented with the challenge of balancing the responsibilities of full-time education and supporting a family.

Fortunately, Washington, D.C.-based philanthropists Joanne and Bill Conway have donated generously to UVA School of Nursing in order to support promising CNL candidates who demonstrate financial need. Their generosity is bringing even more diverse individuals to nursing, furthering ties to the communities they serve.

Paterson Ilunga and Lucie Ndaya

Paterson Ilunga and Lucie Ndaya, a married couple originally from Congo, are students in UVA's CNL program, thanks to Conway Scholarships.

"With this scholarship, I feel more empowered to reach my long-term objectives and vision to specialize in obstetrics and gynecology," says Ndaya.

"I'm a parent, husband, and an adult learner, which presents my family with some financial constraints and pressures," says Ilunga. "The Conway Scholarship soothes these pressures, allowing me to totally concentrate on my education."

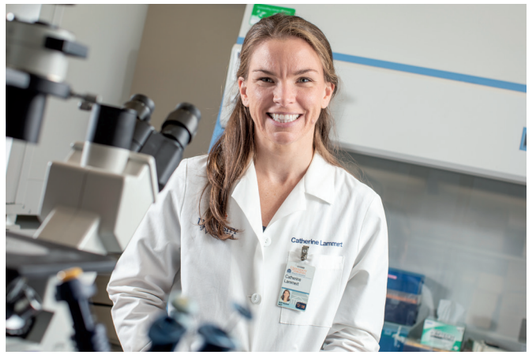
MENTORING IN THE LAB

For generations, doctors and researchers thought that the nervous and immune systems rarely communicated, but a discovery made in the lab of UVA neuroscientist Jonathan Kipnis has changed that.

Thanks to work from UVA's Center for Brain Immunology and Glia (BIG), we now know that these two systems work together harmoniously—the immune system in near-constant observation of our brain's health and activity. We also know that this link shows great promise for treating a host of prominent diseases, such as Alzheimer's, Parkinson's, multiple sclerosis, autism, and schizophrenia.

The chance to study under pioneering researchers like Kipnis attracted Cat Lammert to UVA.

"I have grown so much in my time at UVA, and it's all due to the people I'm surrounded by at the BIG Center," says Lammert, a PhD candidate who studies autism and brain development. "The ideas, critiques, and suggestions that I receive have only made my work better and pushed me in a direction that I never could have imagined on my own."



Cat Lammert is a PhD candidate in the Center for Brain Immunology and Glia.

What's more, Lammert says that the way the BIG Center is organized sets it apart from other institutions.

"You can find great neuroimmunology research at many universities, but it usually isn't connected to other disciplines," says Lammert. "But at UVA it's multidisciplinary. Our doors are open, our labs are all in the same building, and all of the disciplines are wrapped around neuroimmunology."

THE REALIZATION OF A DREAM

For Jomar Aryee, a fourth-year student in the UVA School of Medicine, it's all about his family.

"They're really proud of me," says Aryee, who moved to the United States from Jamaica when he was 16. "During my family's Thanksgiving gathering a few months ago, my aunt proudly said, 'Jomar, you will be the first doctor in the family.' It was at that moment I realized that I'm doing something so many of my family members didn't have the chance to do."

Since arriving in Charlottesville, Aryee has tackled the intense academic rigor a medical education presents while finding time to mentor minority students through the Student National Medical Association's (SNMA) Discover Medicine program.

"I'm grateful that the School of Medicine and Office of Diversity provide support for our organization, SNMA, which allows students like me to give back to the community," says Aryee, who will pursue a career in orthopedic surgery.

"The culture at UVA is such that it really allows you to cultivate your passions," says Aryee. "My classmates are spectacular, my professors are excellent, and the coursework is extremely interesting."

And fortunately for Aryee, his medical school journey was made possible by the generosity of others who came before him—a scholarship from the School of Medicine Class of 1940.

"What UVA does when it gives students scholarships is to make a dream real," says Aryee. "You can't quantify that." ■

Jomar Aryee

The Future of Healthcare

STUDENTS IN THE UVA SCHOOL OF Medicine and UVA School of Nursing bring their passion for helping others into the classroom and beyond. Working side-by-side with today's healthcare pioneers, a UVA graduate is fully prepared to care for patients and affect change at the systems level. Support for tomorrow's leaders ensures UVA is able to attract the best and brightest young minds from around the world.

SPACES
HEALTHY MOVEMENT AT ALL AGES

NEW FACILITY TO CENTRALIZE ORTHOPEDIC CARE

UVA ORTHOPEDICS' Ivy Mountain Project has one driving motivation: getting you back to doing what you love. The state-of-the-art outpatient facility will offer seamless care found in few other places—all in one, easily accessible setting.

Complete with walking gardens and outdoor therapeutic spaces, this world-class complex will provide on-site diagnosis, imaging, surgery, physical therapy, and rehabilitation. In addition to nationally renowned expertise in a number of specialties, including hand, spine, sports medicine, foot and ankle, orthopedic trauma, sports concussions, and prosthetics and orthotics, Ivy Mountain will offer same-day hip and knee replacement—a boon that Dr. Bobby Chhabra, chair of UVA's Department of Orthopedic Surgery, says will be one of the centerpieces of this building.

"The major advances in hip and knee replacement operations, including computer and robotic technology, as well as anesthesia and surgical techniques, will allow patients to go home the same day," says Chhabra. "We'll be able to provide the most innovative care and treatment technologies for our patients at a more competitive price."

Set to open in 2022, the 195,000-square-foot building will be a home base for healthcare professionals focused on helping patients improve their athletic performance, recover from injury, or prevent future incidents. The only facility of its kind between New York City and Atlanta, it will also offer unparalleled opportunities for ongoing research and education. ■

The Ivy Mountain project will offer patients easy access to comprehensive orthopedic care.

ZGF ARCHITECTS (TOP AND MIDDLE) KAY TAYLOR (BOTTOM)

BUILDING A BETTER CANCER CENTER

CANCER CARE is changing. And that's why UVA Cancer Center is physically changing—ensuring that specialty care is wrapped around an individual and their family from the time they receive their diagnosis until they are back home in their communities, and beyond.

The Emily Couric Clinical Cancer Center building opened eight years ago in the heart of the UVA Health complex. Thanks to generous philanthropic contributions, a shelled fourth floor was built to accommodate future growth. That growth has been incredible. In the last eight years, we saw a 118% increase in patients treated in the Couric building.

A visit to the Couric Center's infusion center illustrates the impact of a growing patient volume. The center, which once treated 40 patients a day, now cares for more than 100 individuals seven days a week. The center is closed only on Thanksgiving and Christmas.

The new space will increase capacity in the infusion center from 36 to 54 chairs. What's more, the space has been designed with patients' comfort in mind.

"We're building a healing environment where patients can receive the care they need in a setting that will help them thrive," says Veronica Brill, MSN, RN, NEA-BC, administrator of cancer services. "The 'living rooms,' as we are calling them, allow for four patients in a room. There's a curtain you can pull for privacy, if you want, or you can talk to your neighbor in a space that is filled with natural light."

The new infusion center will also allow UVA to administer some stem cell transplants on an outpatient basis. The expanded space will also increase the number of clinical trials offered to patients.

Other physical improvements to Couric include a staircase in the lobby to the second floor, moving the retail pharmacy to the first floor, and redesigning some clinics to make them more comfortable to patients.

Cancer care also happens beyond the walls of the Couric Center building. UVA Cancer Care Pantops, formerly known as the HOPE Cancer Center, in eastern Charlottesville will also be renovated. Patients will find everything they need in the redesigned space, including additional infusion bays and a bigger retail pharmacy. ■

Designing Better Patient Care Facilities

OUTSTANDING CARE AND SUPPORT are best delivered in clinical facilities equipped to offer state-of-the-art treatments—and designed to provide convenient, comfortable experiences for patients and their loved ones. Private support helps us design spaces that imagine—and then bring to life—the best care possible for patients today. They also help us remain flexible for the treatments of tomorrow. Capital gifts are investments in the future of healthcare for all of us.

COE SWEET (ABOVE) UVA FACILITIES MANAGEMENT (BELOW)

CROSS-GROUNDS COLLABORATION

LIVING WITH AUTISM

UVA BRAIN INSTITUTE'S PURSUIT OF ANSWERS

Kevin Pelphrey and Micah Mazurek are changing the face of autism care and research at UVA.

WHAT IF WE lived in a world that was fully prepared to support the 1 in 59 children who live with autism? A world where diagnoses are made faster, interventions happen earlier, and school districts are equipped to care for the special needs of these children? At UVA Brain Institute, we are pursuing answers to challenging questions about autism's causes and best treatments.

Unlocking the mysteries of the brain is beyond any one person. It requires building a network that is as nimble and creative as the brain itself. That's why Kevin Pelphrey, a neuroscientist from the UVA School of Medicine, and Micah Mazurek, a clinical psychologist from the Curry School of Education and Human Development, are working together to improve methods of both the diagnosis and treatment of autism. Together, they are pioneering discoveries that will transform communities and help people with autism thrive.

"We're beginning to understand the different causes of autism and understand how we can intervene based on those causes," says Pelphrey. "This idea of actually using brain science to modify which treatment we select for a child is probably going to be the most important thing we can do in the next five years."

While Pelphrey is working to make diagnoses earlier, Mazurek aims to translate those diagnoses into treatment for children.

"The earlier we can begin working with a child with autism, the better the outcome," says Mazurek. "Beginning intervention as early as possible capitalizes on important developmental windows and maximizes children's learning potential."

A new model of care developed by Mazurek and her colleagues uses video conferencing to mentor and train doctors in communities who lack the resources to swiftly and accurately diagnose autism.

"By leveraging technology to support primary care providers in local communities, we are able to eliminate geographic and other barriers to care," says Mazurek.

A unique and powerful collaboration, UVA Brain connects talented faculty and students across the University to develop better methods for understanding the brain, to seek new ways to prevent, treat, and cure brain diseases and injury, and to equip the next generation of neuroscientists and clinicians.

"Our institute is dedicated to bringing together researchers, clinicians, and educators from across UVA to creatively collaborate and bring coherent new insights to brain science," says Dr. Jaideep Kapur, who directs the Institute.

Currently, UVA Brain forges partnerships between the School of Medicine, the College of Arts & Sciences, the School of Engineering & Applied Science, and the Curry School of Education and Human Development.

In addition to autism, UVA Brain focuses research teams in key areas, including: Alzheimer's; Parkinson's; epilepsy; addiction; traumatic brain injury; and neuroimmunology. ■

ADVANCES IN BIOMEDICAL RESEARCH

HEALTHY LIVING AND disease recovery are big, expansive goals. The key to both, however, may be very small. Microcirculation small.

Shayn Peirce-Cottler, PhD, is a proud 'Hoo (Eng. '02) and a professor in the Department of Biomedical Engineering at UVA. Her research focuses on capillaries, tiny blood vessels that transport everything from water and oxygen to glucose and carbon dioxide.

"These vessels are in every single tissue in the body and are a contributing factor in a multitude of diseases," Peirce-Cottler notes. "If your capillaries are healthy, so are you. If we can rebuild and redirect healthy capillaries to a heart muscle after a heart attack, to a foot wound post-surgery, to an eyeball after an injury—we can improve and speed up recovery."

You could say research and engineering are in Peirce-Cottler's blood. With a civil engineering professor as a father, she grew up in his lab and around his graduate students. Fast forward to 2019, and Peirce-Cottler's UVA lab is celebrating its 15th birthday and collaborations that span across Grounds—including doctors, surgeons, basic scientists, nurses, graduate students, and engineers—on a wide variety of research and discoveries.

Her lab specializes in developing and using computational models to study multi-cell biological systems. It's difficult to find an organ or health condition that Peirce-Cottler's work hasn't impacted: eye injuries, the heart and cardio conditions, skin, joints, the pancreas, diabetes, cancer, muscular dystrophy, the brain, and neurodegeneration, to name a few.

"Regeneration of vessels, tissues, organs—that's my overarching passion," Peirce-Cottler says. "Regenerative medicine strives to reset our bodies to essentially heal the way they healed when we were kids. Pain was minimal, the process was quick, and there was little-to-no resulting scar tissue."

Peirce-Cottler is a key member of a collaborative UVA team made up of researchers and clinicians in the College of Arts & Science's Department of Chemistry, the School of Engineering's Department of Biomedical Engineering, and the School of Medicine's Department of Plastic Surgery and Chronic Wound Care Clinic.

Together, they developed a smartphone-based camera system that records dynamic tissue oxygen levels at a wound site. This type of imaging is crucial for foot wounds in diabetic patients, many of whom suffer from poor blood circulation in the legs. Oxygen levels are invisible to the eye, so the mapping allows doctors to better monitor these patients and potentially save their limbs.

"UVA is Goldilocks-sized," Pierce-Cottler notes. "It's not so big that you can't find the people you need to work with. It's not so small that people you want to work with aren't here. And philanthropy at UVA provides collaborations with the funding, resources, and time they require to develop innovative solutions for restoring health." ■

It's hard to find a disease that Shayn Peirce-Cottler's research hasn't impacted.

GIFTS

MAKING A GIFT AND MARKING A LIFE

Tamara and Daryl Bennett

TAMARA AND DARYL BENNETT started dating when he was 17 and she was 15. For the next 41 years, they were inseparable. They made a home together, and they built a life that they both loved. Then Daryl was diagnosed with a rare form of cancer that brought him to UVA Cancer Center.

For the next six years of Daryl's care, the couple regularly made the two-hour drive from their home in Randolph, VA, to Charlottesville. Sometimes they came numerous times a month, sometimes their hospital stays lasted for weeks, but always they were together.

"We trusted the care we got at UVA Cancer Center and UVA Hospital," says Tamara, "And we fell in love with the doctors and nurses there."

Then, in August 2018, six years after his diagnosis of stage four pancreatic and liver cancer, Daryl succumbed to the disease.

"I still miss him every day," says Tamara. "He was my life, my best friend, and my hero. We had a special bond. Not only do I grieve over Daryl, I also grieve over losing the special people that became a part of my life in Charlottesville. That place and those people are in my heart."

While at UVA Cancer Center, Daryl was seen primarily by Dr. William Grosh, an oncologist who Tamara describes as "the best, most caring doctor in the world," and who she now considers a member of her family.

After initial testing, Grosh saw that Daryl required specialized treatment, so he partnered with Dr. John Angle, a vascular and interventional radiologist who also played a key role in Daryl's care.

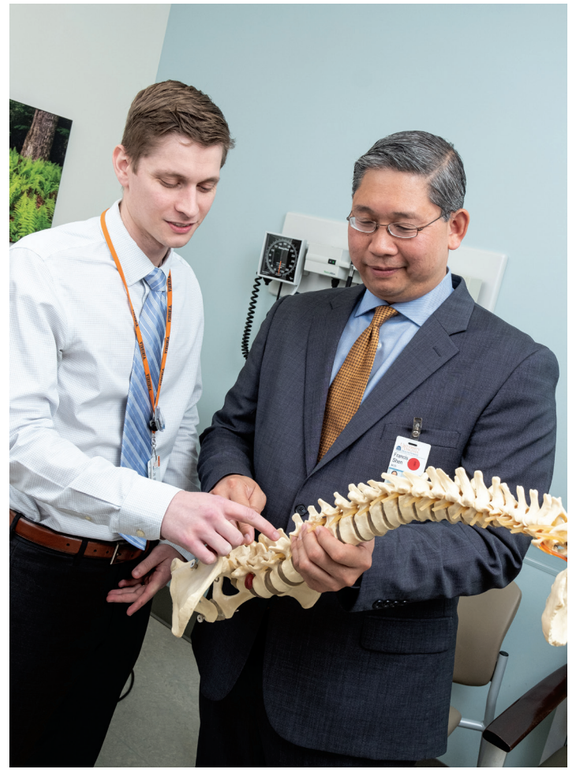
As a tribute to that care, and to remember Daryl's life, Tamara Bennett has included a gift in her estate plan to create the Daryl Bennett Memorial Fund. The fund will support research and clinical care for patients at UVA Cancer Center, as well as advanced imaging work in UVA's Division of Vascular and Interventional Radiology.

"I want all that Daryl and I had to go to someone who can benefit from it," says Tamara. "I want Daryl to be remembered in a very special way. This fund can help doctors, patients, cancer survivors—it can go wherever it is needed most. Daryl and I don't have children, so this is our legacy."

"It's a privilege to know people like Daryl and Tamara Bennett," says Grosh. "It's incredibly hard to lose someone to cancer. Tamara's generosity is inspiring and deeply meaningful. She is turning her monumental loss into real hope for future patients. I'm pleased that this fund can offer an enduring memorial to Daryl's life, even as it touches the lives of cancer patients to come." ■

BROADENING THE SKILLS OF TOMORROW'S SURGEONS

Orthopedic surgical residents like David Noble (left) reap important benefits from the education funds created by Dr. Shen (right).



THE OLD ADAGE for teaching surgery was "see one, do one, teach one." But times have changed, and the procedures, tools, and methods of training young surgeons have grown more complex.

Today's surgical residents need training that is broad and extensive. They also need to stay up to date on the latest and best methods. No one knows that better than Francis Shen, MD (Med '96, Res '02), who is the Warren G. Stamp Professor of Orthopedic Surgery and division head of orthopedic spine surgery at UVA.

Shen started his career in engineering, but he soon realized that he wanted to apply his skills to working with people.

"Orthopedics was a natural fit," says Shen, who spends many full days in surgery. He also runs an active research program and works to advance the future of spine surgery by training post-doctorate research fellows and clinical spine surgeons.

"Developing our residents and fellows to become future surgeons, clinicians, educators, and researchers is becoming more and more challenging," says Shen, who has received a number of teaching awards. "We are always looking at new and innovative ways to train our residents."

To help ensure this type of experience for orthopedic residents at UVA, Shen has created the Young and Carol Shen Resident Educational and Research Fund in honor of his parents, who embody the ideals of life-long learning and teaching.

He is also supporting the Shen Family Resident Education Fund. Both funds provide resources for the departments' educational expenses, including resident awards, visiting professor expenses, and conference, research, and seminar costs.

"This is a way for me to help ensure the future excellence of our residents, which is of vital importance to our patients, but also to the department," says Shen. "As a member of the faculty and a dedicated practicing surgeon, this is extremely important to me. I want to keep my department and my school among the leaders in orthopedic surgery."

The Shen funds will offer important resources going forward, as the department prepares to move into its new Ivy Mountain location—a comprehensive center for orthopedic care. In addition to state-of-the-art patient care, Ivy Mountain will support expert training for orthopedic residents and fellows.

"It's an exciting new chapter for the department," notes Dr. Bobby Chhabra, (Med '95), chair of orthopedic surgery. "The Shen funds will help us make the most of these wonderful new opportunities to keep our trainees at the top of their game." ■

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