

EVMS

MAGAZINE

MAN *of the* HOUR

*Dr. L. D. Britt chosen for
one of medicine's highest honors*

*L. D. Britt, M.D.
Chairman
Department of Surgery*

**PRESIDENT AND PROVOST OF EVMS,
DEAN OF THE SCHOOL OF MEDICINE**

Richard V. Homan, MD

EDITORS

Vincent Rhodes, PhD
*Editor-in-Chief, Chief Communications &
Marketing Officer*

Nancy Chapman
Managing Editor, Account Executive

Linda Cobb
Copy Editor

Doug Gardner
News Director

Virginia Hilton
Account Executive

Jennifer McCarrel
Assistant Director of Marketing & Communications

GRAPHIC DESIGN

John Comerford, Joy Ellinor
Art Directors

Christina Boubas
Graphic Artist

EDITORIAL BOARD

Melissa Lang
Executive Director of Alumni Relations

Connie McKenzie
Assistant Vice President for Development

Natalie Semmler
Marketing & Communications

Ashley Gentry, Brooks Lively
Development

Aline Landy
Alumni Relations

CONTRIBUTORS

Karen Doss Bowman
Eric Lusher

EVMS Magazine is published five times a year. Copies are available on campus, in doctors' offices and by mail. An electronic version is available online at www.evms.edu/digitalmagazine. To request a copy or share news, please contact Nancy Chapman, Managing Editor, 757.446.7070 or news@evms.edu.

For EVMS Medical Group Patients:

If you do not want us to contact you for fundraising efforts, you must notify our Privacy Office through one of the following channels:

- IN WRITING:
EVMS Medical Group
Privacy Office
4111 Monarch Way, Suite 500
Norfolk, VA 23508
- THROUGH EMAIL on the "Contact Us" page at evmsMedicalGroup.com
- BY CALLING the Privacy Line at 757.451.6298
- BY COMPLETING an "opt out" form available at each clinical unit

EVMS

MAGAZINE

2016-2017 | ISSUE 9.3



Dissecting Contemporary Human Anatomy

A new twist on an old art
page 12

departments



5



6



8



16



22

- 4 Picture This
- 5 Rounds
- 10 Vision Quest
- 11 Off Campus
- 19 Old School
- 20 Alumni Connections
- 22 My Story
- 23 In Focus

FOLLOW US



/EVMSedu



/EVMSedu



EVMS.edu/Pulse



/EVMSedu



/EVMSedu



/edu/19574



/EVMSedu



/EVMS



/+EVMSedu



In reviewing the stories within this magazine, I am struck by the far-reaching impact of our faculty members. Whether being honored by colleagues around the world, winning highly competitive NIH grants or publishing studies that advance their fields, our brilliant physicians and researchers have put EVMS on the map.

Let me start with “one of the most influential leaders in all of American academic medicine,” according to one of his peers. Our renowned Chair of Surgery, L.D. Britt, MD, MPH, pictured on the cover, became the first EVMS physician elected to the elite National Academy of Medicine, one of the highest honors in medicine. On page 16, learn why Dr. Britt merits the distinction of being NAM’s first acute-care specialty surgeon.

EVMS’ much-lauded ultrasound leader, Alfred Abuhamad, MD, Chair of Obstetrics and Gynecology, earned more acclaim when a book he co-authored was named Medical Book of the Year by the British Medical Association. Paul Marik, MBBCh, Chief of Pulmonary and Critical Care Medicine, added another national honor to the five major teaching awards he already holds. And a team led by John Semmes, PhD, Director of the Leroy T. Canoles Jr. Cancer Research Center, won a \$2.1 million grant from the National Institutes of Health to continue the center’s research on a prostate-cancer biomarker. See the Rounds section on page 5 for details on all of this news.

While awards and accolades are appreciated, their ultimate purpose is to move EVMS toward improving health and saving more lives in our community. Artina Slaughter’s story on page 22 is a good example of how EVMS makes that kind of difference. Yet we know this is only possible with your continued support and generosity. On behalf of everyone at EVMS, I thank you.

Sincerely,

Richard V. Homan, MD

EVMS BOARD OF VISITORS

James J. Izard II <i>Rector</i>	Robin D. Ray <i>Secretary</i>	I.A. Barot, MD '01	Sharon S. Goodwyn, Esq.	Marcus L. Martin, MD '76
David A. Arias <i>Vice Rector</i>	Derwin P. Gray, MD <i>Treasurer</i>	Sarah Bishop	Hon. Paul D. Fraim, Esq.	Rear Adm. Kevin M. Sweeney (ret.)
		Julie L. Damman, MD '88	Barry L. Gross, MD	Mark R. Warden
		Heyward R. Donigan	Chester M. Hart Jr.	
		Theresa S. Emory, MD '89	Fred W. Lindsay, DO	

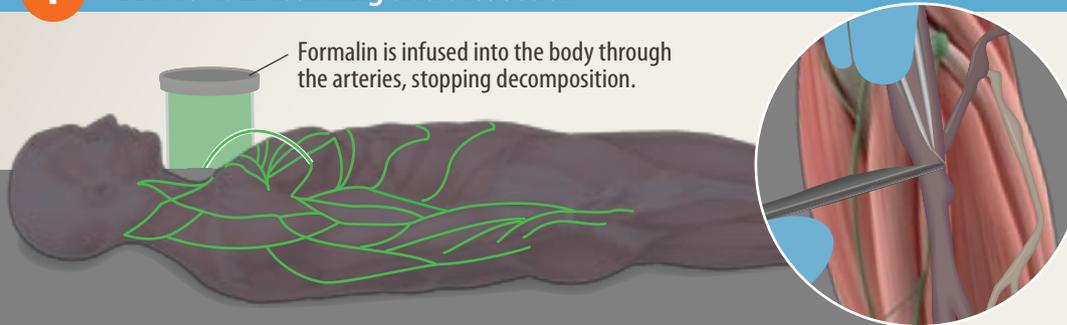
EVMS FOUNDATION BOARD OF TRUSTEES

Wayne F. Wilbanks <i>Chairman</i>	Joan P. Brock	Robert C. Goodman Jr., Esq.	Darleen Mastin	Charity A. Volman
Susan R. Colpitts <i>Treasurer</i>	Paul D. Chidester, MD	Christopher D. Kastner	Vincent J. Mastracco Jr., Esq.	Alan L. Wagner, MD
Andrew S. Fine <i>Secretary</i>	Cynthia C. Earhart	Patricia Y. King, MD	Vandana A. Patel, MD	Lewis W. Webb III, Esq.
	Paul J. Farrell	Ronald M. Kramer	Priscilla Roady	John O. Wynne Jr.
	Steven D. Fredrickson	Edward L. Lilly, MD	Thomas V. Rueger	
	Richard S. Glasser, Esq.	Frances P. Luter	Jane R. Short	
	Dawn S. Glynn	B. Thomas Mansbach, Esq.	Stephen M. Snyder	

Plastination: A Preservation Process

Plastination keeps anatomical tissues from decaying and allows them to be handled by students without exposure to toxic chemicals and pathogens. The process, developed in 1977, preserves most of their properties by replacing water and fat with silicone polymers.

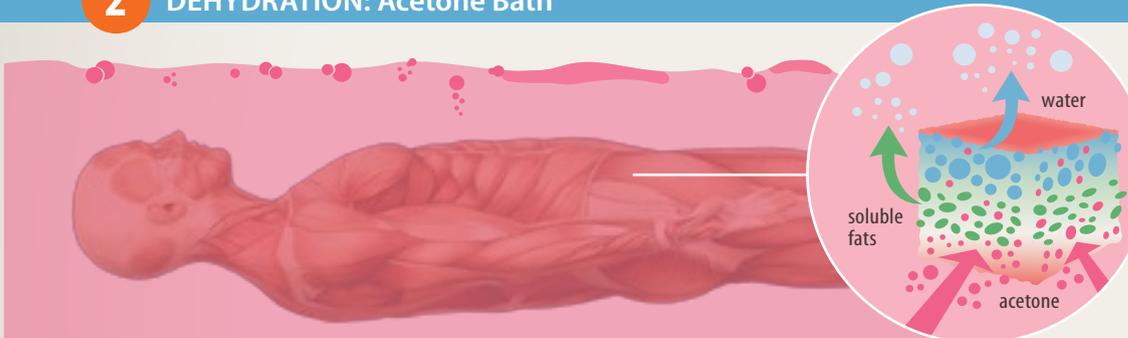
1 FIXATION: Embalming and Dissection



Formalin is infused into the body through the arteries, stopping decomposition.

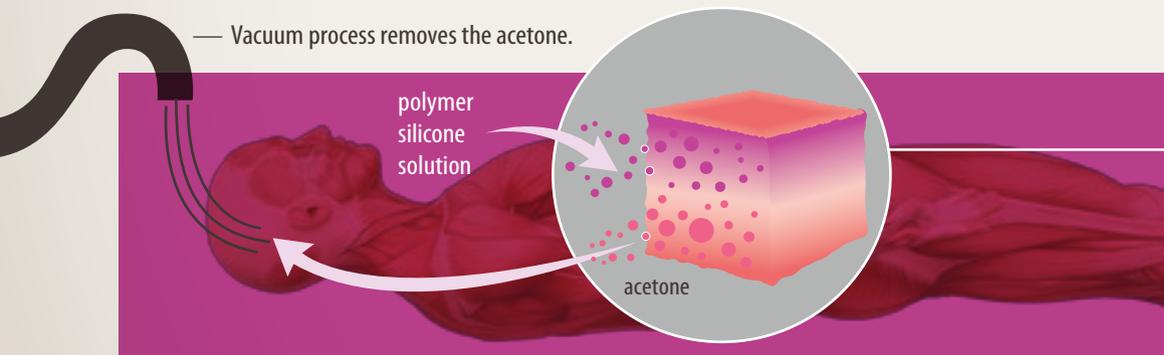
Specimens are prepared by anatomical dissections. Skin, fatty and connective tissues are carefully removed. Finished specimens are used to train and educate students.

2 DEHYDRATION: Acetone Bath



Specimens are placed in an acetone bath. Water and soluble fats are dissolved from the bodies and replaced by the acetone, which readily evaporates.

3 PLASTIC PERMEATION: Acetone to Plastic Exchange



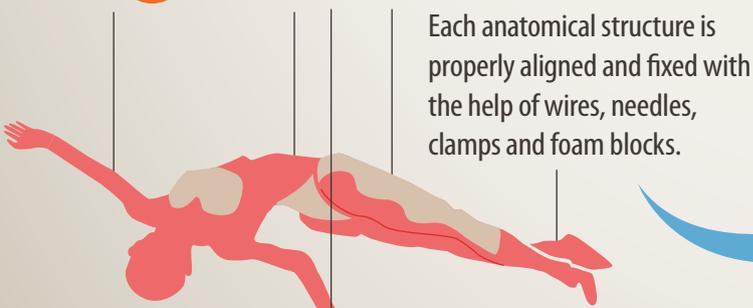
Vacuum process removes the acetone.

polymer silicone solution

acetone

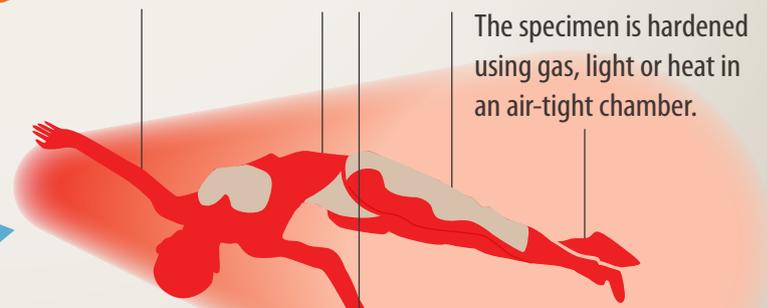
Specimen is immersed in a polymer silicone solution and placed in a vacuum chamber. The vacuum removes the acetone from the specimen and helps the polymer silicone to penetrate cells. This process can take several weeks for a full body.

4 POSITIONING



Each anatomical structure is properly aligned and fixed with the help of wires, needles, clamps and foam blocks.

5 HARDENING



The specimen is hardened using gas, light or heat in an air-tight chamber.

▶ **SEE MORE:** Learn how a heart undergoes the plastination process at evms.edu/digitalmagazine. **Source:** Gunter von Hagens' Body Worlds, bodyworlds.com.



Marybeth Hughes, MD
(MD '97, Surgery Residency '02)

“I hate cancer. It affects so many people — one in three adults. I want to eradicate it.”

Marybeth Hughes, MD

NIH cancer research expert to lead EVMS Surgical Oncology

EVMS has welcomed home an alumna to head its surgical oncology division. Marybeth Hughes, MD (MD '97, Surgery Residency '02), has an extensive background in clinical trials and translational research with a special focus on elevating the care of cancer patients. She will serve as Chief of Surgical Oncology in EVMS Surgery and Assistant Professor of Surgery.

Dr. Hughes comes to EVMS after serving in the Surgical Oncology Thoracic and Gastrointestinal Oncology Branch Center for Cancer Research at the National Cancer Institute (NCI), National Institutes of Health (NIH) in Bethesda, MD, where she also was Director for the Surgical Oncology Research Fellowship Program. She completed a surgical fellowship at the NCI before joining its faculty in 2004.

Her passion is clear.

“I hate cancer,” Dr. Hughes says. “It affects so many people — one in three

adults. I want to eradicate it.”

She plans to focus her work at EVMS on strengthening the biorepository, working collaboratively with EVMS faculty already conducting cancer research and raising the clinical profile.

“I hope to bring the most innovative cancer care to Hampton Roads,” Dr. Hughes says. “To do that, it’s going to take big partnerships with Sentara and Virginia Oncology Associates and dedicated work in multidisciplinary teams.”

Dr. Hughes has served as principal investigator and associate investigator for various clinical trials at the NIH on cancer-related protocols. Her work has been published in numerous journals and books on surgical oncology topics, such as neuroendocrine tumors, melanoma liver metastases, pancreatic cancer, adenocarcinoma of the appendix, colorectal cancers, renal-cell carcinoma and breast cancer.

She is a national and international

presenter and teaches and mentors medical students, residents and fellows in surgical oncology. While at the NIH, Dr. Hughes re-developed the curriculum for the Surgical Oncology Research Fellowship Program and taught Advanced Trauma Life Support for the Department of Defense.

“Our department is thrilled to have Dr. Hughes join the EVMS family, and we are fortunate to be able to recruit someone of her caliber,” says L.D. Britt, MD, MPH, the Edward J. Brickhouse Chair in Surgery, the Henry Ford Professor of Surgery and Professor and Chair of Surgery.

“With the pending and well-deserved retirement of Dr. Roger Perry,” Dr. Britt says, “we anticipate a smooth transition as the baton is handed off to continue our relay race to achieve the highest quality and most reliable care for all patients.” □



Learn more about Dr. Hughes on evms.edu/pulse.

CDC selects EVMS team for HPV study



The Centers for Disease Control and Prevention (CDC) has awarded an EVMS research team led by Craig Derkay, MD, Professor of Otolaryngology – Head and Neck Surgery, two one-year contracts totaling more than \$700,000. The contracts will fund a study on the impact of vaccinations on the incidence and prevalence of Juvenile Onset Recurrent Respiratory Papillomatosis (JORRP) in the US.

JORRP, characterized by hoarseness and sometimes by difficulty breathing, is caused by the human papilloma virus

(HPV) and is believed to be contracted from the mother. One HPV vaccine, Gardasil, has been available in the U.S. for about 10 years. Anecdotally, physicians around the country have noted a decline in new HPV cases since then. The CDC chose the EVMS team to organize the effort to validate those observations by recruiting colleagues from around the country to register their patients.

EVMS researchers will monitor and analyze the data over five years to determine trends in JORRP. □



For more information, visit evms.edu/pulse.

Skilled teacher wins national recognition

Critical-care physician Paul Marik, MBBCh, has teaching awards from every institution where he has worked. Since his arrival at EVMS in 2009, he has received five awards, including the Teacher of the Year Award from the Virginia chapter of the American College of Physicians (ACP).

In March 2017, he will add his most prestigious award yet: the ACP Award for Outstanding Educator of Residents and Fellows.

This national recognition comes as no surprise to all who know him as a role model, mentor and source of inspiration. His colleagues credit Dr. Marik for a surge in student and resident interest in critical-care medicine.

“He creates a nurturing learning environment where residents feel



Dr. Paul Marik is a much-honored professor.

comfortable being able to ask questions and build on their knowledge base,” says Mit Patel, MD, a third-year resident in Internal Medicine.

Dr. Marik is the EVMS Foundation Distinguished Professor in Internal Medicine, Professor of Internal Medicine and Chief of Pulmonary and Critical Care Medicine at EVMS. A talented clinician and researcher, as well as a model teacher, he has had an impact well beyond EVMS. His two books and other educational materials have been adopted by pulmonary/critical-care fellowships around the U.S., according to Jerry Nadler, MD, the Harry H. Mansbach Chair in Internal Medicine, Professor and Chair of Internal Medicine and Vice Dean for Research.

The books have been translated into several languages, Dr. Nadler says, “emphasizing the international appeal and relevance of his educational style.” □



Mary Ann Clements manages EVMS' biorepository, which stores samples used in researching cancer biomarkers.

EVMS wins NIH grant for biomarker research

The National Cancer Institute, part of the National Institutes of Health, has awarded researchers at the Leroy T. Canoles Jr. Cancer Research Center a \$2.1 million grant to continue work on a breakthrough in early detection of aggressive prostate cancer. The EVMS-led team comprises internationally recognized translational-research groups from the U.S. and Canada.

The EVMS team will be one of 15 Early Detection Research Network's Biomarker Development Laboratories across the country. These development groups work to streamline the bench-to-bedside process — turning laboratory research into clinical treatment.

“This grant will help us continue our work to develop tests that can identify aggressive prostate cancer before it advances and to realize our dream of

personalized medicine that can tailor treatment decisions to fit the individual patient,” says John Semmes, PhD, Director of the cancer research center, the Anthem Distinguished Professor for Cancer Research and Professor of Microbiology and Molecular Cell Biology.

Julius Nyalwidhe, PhD, of the cancer research center, co-leads the EVMS group with Dr. Semmes. He also is an Assistant Professor of Microbiology and Molecular Cell Biology.

In the initial phase of the study, researchers identified a liquid-biopsy biomarker for aggressive prostate cancer. It's the first liquid biomarker of its kind. The next step in the study is to optimize assay performance and test for clinical effectiveness. It could be only five years before the biomarker is widely used in clinical environments. □

Here's what you've missed recently in EVMS' digital newsroom, the Pulse:

- What everyone needs to know about breast cancer
- The #1 profession for voice problems may surprise you
- PA students praised for work assisting veterans
- Male birth-control shot effective in preventing pregnancy
- Pelvic floor disorder is more common than you think
- Researcher discovers new way to extract data from prostate cancer biopsies

Check your EVMS Pulse daily.



Read these stories and more at evms.edu/pulse.

Legalized medical marijuana related to increased high-school dropout rate

A study led by Andrew Plunk, PhD, Assistant Professor of Pediatrics, and published in the peer-reviewed journal *Drug and Alcohol Dependence*, documents the first evidence that medical-marijuana laws have a long-term negative impact on educational attainment.

The study found a 10 percent increase in high-school dropout among 12th-graders in states with medical marijuana laws.

“There are legitimate reasons to allow medical marijuana,” Dr. Plunk says, “and our study also doesn’t speak to an issue like decriminalization.”

“The Impact of Adolescent Exposure to Medical Marijuana Laws on High School Completion, College Enrollment and College Degree Completion,” used several large datasets, such as the U.S. Census. People all across the U.S. were compared based on whether they lived in a state with a medical-marijuana law when they were high-school age between 1994 and 2013.

“One implication of our study,” Dr. Plunk says, “is that there likely is a direct link between marijuana and education. And while we need to do more work to verify exactly how medical-

marijuana laws, and by extension marijuana use, directly affect educational attainment, these findings are an important first step.”

The study implies that legalizing medical marijuana could be associated with an additional 120,000 high-school dropouts over a 17-year span and a 62 percent increase in daily marijuana use among 12th-graders.

Also, the laws’ impact doesn’t seem to be limited to high school. “Our study suggests that the passage of medical-marijuana laws could have led to 5.9 percent fewer high-school graduates going on to college,” Dr. Plunk says. “And of those students who began college, these laws also could have led to 1.9 percent fewer of them completing a college degree. This represents an enormous unintended consequence for America’s youth.”

Dr. Plunk and his co-authors, which include EVMS colleagues Paul Harrell, PhD, Assistant Professor of Pediatrics, and Kelli England Will, PhD, Professor of Pediatrics, note that these findings should be interpreted cautiously until other studies can verify them.

“There are legitimate reasons to allow medical marijuana,” Dr. Plunk says, “and our study also doesn’t speak to an issue like decriminalization. But changes in drug policy do signal changes in our attitudes about drug use. This is especially important for young people since the developing brain is likely more sensitive to the negative consequences of drug use.” □



Andrew Plunk, PhD



Learn more about the study’s implications in a video interview with Dr. Plunk at evms.edu/pulse.

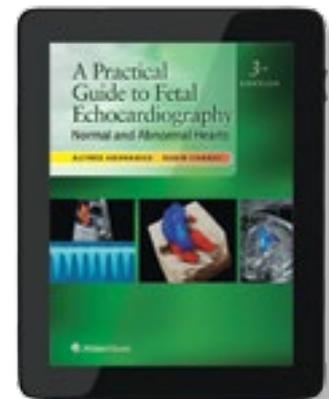
Dr. Alfred Abuhamad’s book earns international acclaim

A book co-written by Alfred Abuhamad, MD, the Mason C. Andrews Chair in Obstetrics and Gynecology, Professor and Chair of Obstetrics and Gynecology and Vice Dean for Clinical Affairs, was recognized recently by the British Medical Association.

The organization named *A Practical Guide to Fetal Echocardiography: Normal and Abnormal Hearts* the British Medical Association Medical Book of the Year.

The comprehensive guide covers every aspect of fetal heart examination and all major cardiac malformations. “The text was designed to help physicians and sonographers better evaluate fetal heart abnormalities,” Dr. Abuhamad says. “I am gratified to learn that the medical community has found value in what we created.”

This is the third edition of the book, written with Rabih Chaoui, MD, Professor of Obstetrics and Gynecology at the Prenatal Diagnosis and Human Genetics Center in Berlin. □



For more details, visit evms.edu/pulse.

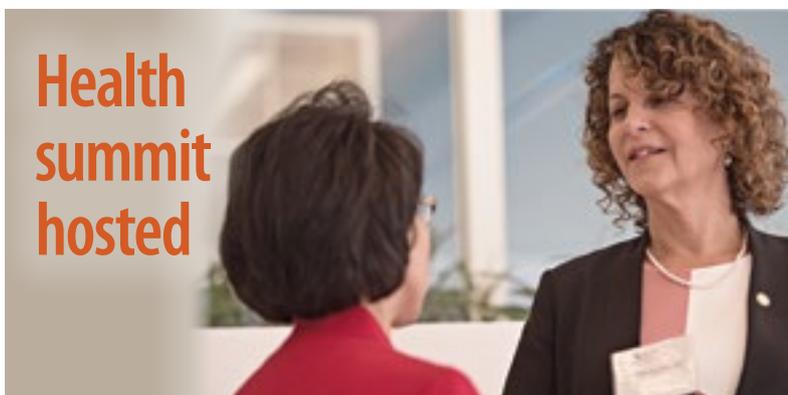


Male birth control shot effective, but study stopped short

A contraceptive study sponsored by CONRAD and the World Health Organization found that a combination of hormones delivered via injection to men were effective in preventing pregnancy.

The results, published in the *Journal of Clinical Endocrinology & Metabolism*, found that the shot was effective for 92.5 percent of participants, which is comparable to female contraceptive methods. But while the results were promising, an ethics board overseeing the study shut down the trial after some participants reported heavy mood swings, depression, severe acne and increased libido. Currently, no further development is planned for this birth-control shot.

CONRAD was established in 1986 under a cooperative agreement between EVMS and the U.S. Agency for International Development to improve reproductive health around the world. □



EVMS recently hosted a meeting of Hampton Roads health officials to discuss plans for a regional health agenda. Among the speakers were Marissa Levine, MD, MPH, Virginia State Health Commissioner (right), and EVMS' Cynthia Romero, MD (MD '93), Director of the M. Foscue Brock Institute for Community and Global Health and a former state health commissioner.

Internationally known creator of Standardized Patient Program retires

Standardized patients are an integral part of the curriculum for MD and Health Professions students at EVMS. Many would say that's thanks to the hard work and dedication of Gayle Gliva-McConvey, who retired recently.



Gayle Gliva-McConvey

Ms. Gliva-McConvey helped build the Standardized Patient

Program from the ground up, starting in 1993.

"We recruited Gayle to establish a program that would be a model for the nation," says C. Donald Combs, PhD, Vice President and Dean of the School of Health Professions. "She has been instrumental in doing just that. What is now the Sentara Center for Simulation and Immersive Learning at EVMS plays an essential role in the school's educational programs, as well as in many other institutions in the mid-Atlantic region."

Over the span of 23 years, Ms. Gliva-McConvey worked tirelessly to turn the program into a \$3 million enterprise to serve EVMS students, residents and over 60 external clients.

In addition to her work at EVMS, she has also been a speaker on Standardized Patient methodology, served as President of the Association of Standardized Patient Educators (ASPE), an international organization, was named Educator of the Year by ASPE in 1998 and has published several articles on the topic. □



Learn more about Gayle Gliva-McConvey and standardized patients at evms.edu/digitalmagazine.

“This is something we are all passionate about”

Health department partners with EVMS to reduce infant mortality

In 2013, the Virginia Department of Health found that the state’s infant-mortality rate was about the same as the national average: 6.2 infant deaths per 1,000 live births. But in Norfolk, the rate for African-Americans was much higher — nearly tripling to 18.2.

This disturbing trend spurred the Virginia Healthy Start Initiative to award EVMS a grant to administer the Loving Steps program. Loving Steps aims to eliminate significant disparities in perinatal health experienced by African-American women and their families to prevent infant mortality and low-weight births.

The program uses a home-visiting model to help high-risk families have healthy pregnancies and get parental education, resources and support up to two years after their babies are born.

Elinida Southwell first heard about the program from her sister. With two young sons, she was struggling to find a way to deal with all of the issues she was facing. Although skeptical, she signed up for the

Loving Steps support group.

“At first I wasn’t sure how they could help, but during each meeting I learned something new about resources that were designed to help people just like me,” Ms. Southwell says. Soon after her first support group, she took advantage of the program’s other resources, including home visits to identify any medical, nutritional, social and economic risks.

Within the first few visits, her community health coordinator, Virginia Jones-Thorpe, identified that her oldest son might be able to qualify for a free school designed to help him overcome his developmental and social delays. “The school made all the difference in the world,” Ms. Southwell says. “The hands-on family approach helped him develop and helped me learn how to be a better parent.”

The help didn’t stop there. When Ms. Southwell was having trouble getting assistance from a municipal agency, Ms. Jones-Thorpe didn’t hesitate to step in. “She’s truly an advocate for the mother, father and

the children,” Ms. Southwell says. “I don’t know where we would be without her help.”

Right now she’s also helping them evaluate what they need to do to be able to buy their own home.

“We try to identify problems that these families are facing and connect them with resources that can make a difference,” says Shawn Ware-Avant, Loving Steps Project Coordinator for the Virginia Healthy Start Initiative. “The racial disparities for children in Norfolk are significant. Changing this trend is something we are all passionate about.” □



Loving Steps provides support to parents so they can give their infants a healthy start in life.



Sugar Shacks

Chair of Pediatrics has a pretty sweet hobby

On campus, C.W. Gowen Jr., MD, is the EVMS Foundation Chair in Pediatrics, Chair and Professor of Pediatrics and a neonatologist at Children's Hospital of The King's Daughters (CHKD), where EVMS' Pediatrics Residency Program is based. Off campus, Dr. Gowen pursues a hobby befitting a pediatric specialist.

How did you get interested in building sculptures out of sugar blocks?

The sugar project became a tradition in our family after we won a small sugar village at a fundraiser for CHKD in the late 1990s. The village lasted for a couple of years, and as it fell apart one holiday, our daughter Sarah said, "If that lady baker can do it, so can you." Our first project was a church and bell tower.

What do you enjoy most about it?

I love architecture, and building things out of sugar is very relaxing for me. Each structure takes up to a year to make.

How much sugar is in your creations?

It can take up to 300 pounds of sugar to make one structure. The number of blocks I have to make, of course, depends on the project's size and design.

How long do they last? Are they transportable?

Our structures would last for a year or two before crumbling. The blocks are joined together using only royal icing. We've tried transporting them, but they're too fragile.

What are the challenges of this hobby?

Sugar is a medium that can be unforgiving and at times just doesn't want to hold together. I've had to rebuild parts of a structure several times. It takes time and patience. My favorite projects have been Notre Dame, Hogwarts, Sleeping Beauty's castle and Grand Central Station. My most recent project was the Colonial Capitol in Williamsburg.

What are you most passionate about in your work at EVMS?

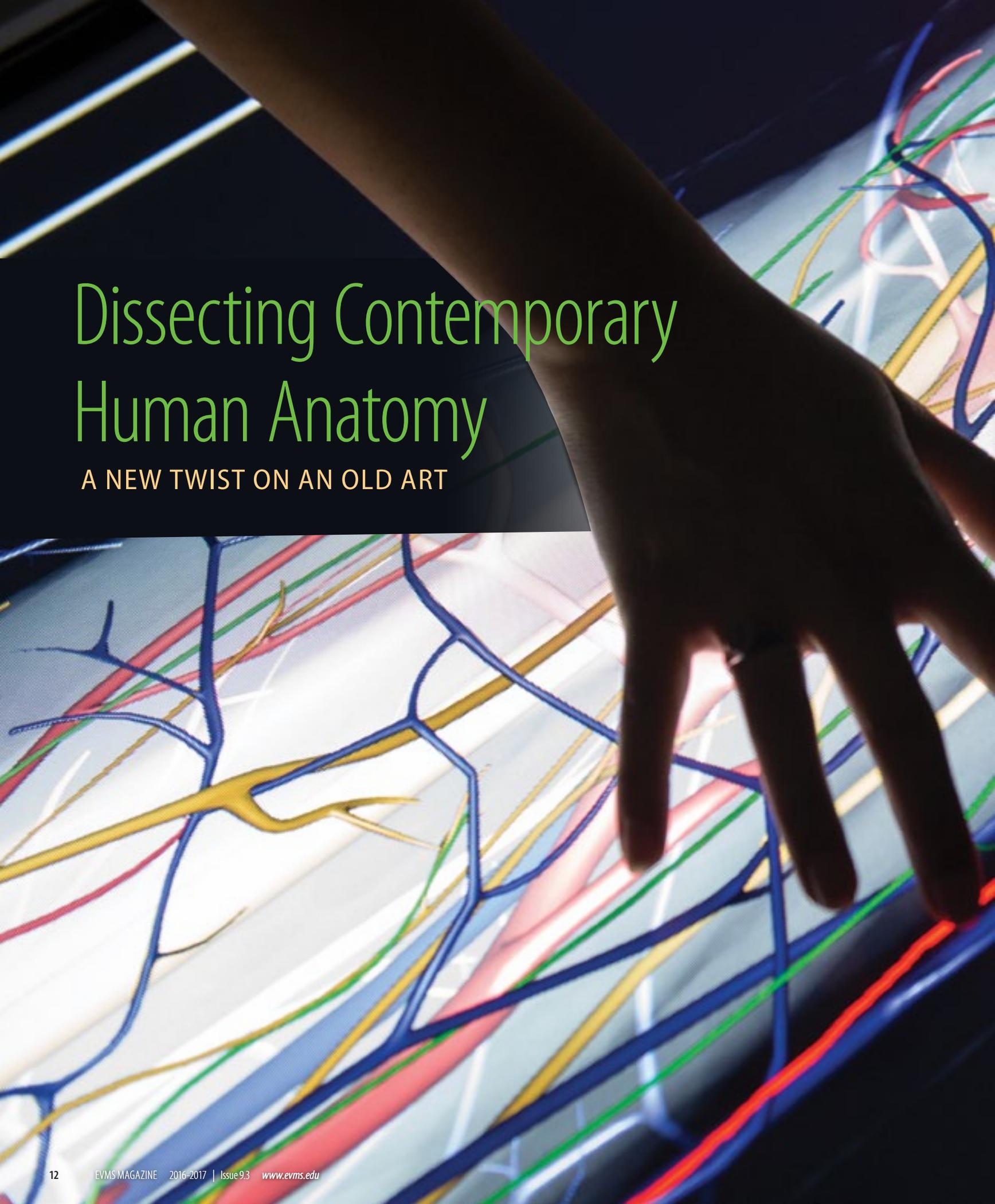
I love being able to take care of the premature infants to give them the best chance possible to make it.

Why have you remained at EVMS for more than 26 years?

My wife, Marilyn [Marilyn Gowen, MD, Assistant Professor of Pediatrics and a CHKD pediatric pulmonologist], and I joined EVMS and CHKD in 1990. We love that CHKD is a freestanding hospital for children as we both trained in that environment. I also appreciate that EVMS wants to be known as the most community-oriented school of medicine and health professions in the country. □



To learn more about how Dr. Gowen makes his sugar-block sculptures, visit evms.edu/digitalmagazine.



Dissecting Contemporary Human Anatomy

A NEW TWIST ON AN OLD ART



THE BOUNDARIES BETWEEN LIFE AND DEATH — BETWEEN SKIN AND BONE — ARE EXPLORED HERE.

A profusion of blood vessels extends over and through fleshy, pink tissue like rivers and tributaries across a dense landscape. Bones meet joints and ligaments where strings of muscle seemingly connect and overlap.

Carrie Elzie, PhD, stands silently at the front of the lab and observes the artistry of anatomy.

Today, her students are engrossed in full dissection. In pairs, they talk softly as they slice. On a different day, they will use imaging to turn, rotate and cut into cross-sections of a virtual cadaver with simple strokes of the hand.

Here, students are studying the complex systems of human anatomy in a true dichotomy of an age-old art and contemporary science.

“Medicine wasn’t my calling. I don’t have the knack for working on anybody who’s still breathing and whose life is in my hands,” says Dr. Elzie, Assistant Professor of Pathology and Anatomy. “But I certainly have the fascination of understanding the intricacies of the human body and the disease processes it can take on.”

What Dr. Elzie does have a knack for is teaching students and helping them discover a career path. That knack, plus her passion for anatomy, is what led her to launch the new Master of Contemporary Human Anatomy (CHA) program at EVMS.

“It’s called ‘contemporary’ because it’s learning the human body through medical imaging and dissection,” she says, “so it’s viewing the body differently than what we

EVMS’ new virtual dissection table enables students to practice dissection techniques even when the anatomy lab isn’t available to them.

have been doing over the past 100 years in anatomy.”

The three-semester program marries traditional sciences and classic anatomy coursework with emerging technology like virtual dissection, 3D printing and plastination (see Picture This on page 5). It begins in the summer with an intense seven-week gross-anatomy experience where students conduct a full dissection of a cadaver — inch by inch.

“I love the human body. I think it is the most amazing and complex system,” says Katie Van Winkle, CHA Class of 2017. “I love that a lot of it doesn’t make sense still — the whole intricacy of everything that is working in your body, and how every body that you dissect is different, and yet every one is still the same.”

ANATOMY OF THE PROGRAM

In their first semester, CHA students are taught gross anatomy and embryology, are introduced to the school’s renowned ultrasound curriculum and learn to read and interpret MRI and CT imaging.

By the fall, they work as teaching assistants in the anatomy classes of

medical students and those in the Medical Master’s program. They take histology with medical students and a course in research in medical and health-professions education.

And because CHA is built to be a flexible master’s degree, students select the electives and capstone project during their spring semester that will best prepare them for their post-graduate goals.

The 10 students in the inaugural class have diverse career interests that include medical school, physician-assistant program, medical illustration, anatomy education and medical-model engineering.

For Malbika Ramchandani, CHA Class of 2017, the CHA program is a first step toward medical school. That’s been the lifelong dream of the Virginia Beach resident who attended the Health and Sciences Academy at Bayside High School.

“I remember being 14 and Dr. Goodmurphy visiting our class with his box of organs to teach us about lungs and kidneys,” Ms. Ramchandani says. “That made me choose medicine.”

This spring, Ms. Ranchandani will spend a portion of the semester at the

Plastinarium in Guben, Germany, where she will learn the science of the body-preservation techniques of plastination from its creator, Gunther von Hagens.

It will be yet another way for Ms. Ranchandani to explore human anatomy and the impact of the field of medicine.

“Medicine is evolving, and you have to keep growing with it,” she says. “This program makes me want to push myself.”

FROM SCALPEL TO SCREEN

Tucked in a classroom in the back corner of Lewis Hall is a virtual dissection table — think of a table-sized iPad — that enables CHA students to practice dissection techniques when they can’t work in the cadaver lab. It’s yet another way that CHA sets itself apart from traditional anatomy programs.

On the opposite hall, CHA students work in the school’s 3D-printing lab, creating medical simulators that will be used by medical and health-professions students alike.

Like other contemporary anatomy programs across the country, EVMS has introduced multimodal learning in the lab.

Rick Drake, PhD, an anatomist for 40 years, has written the textbook used by many schools and universities today. He is currently Director of Anatomy at the Cleveland Clinic Lerner College of Medicine and serves as the Co-Editor-in-Chief of the Anatomical Sciences Education Journal, which publishes much on the topic of anatomy education and training.

He considers the addition of technology in the anatomy lab as a contemporary approach to an old art.

“Anatomy is a very visual subject that’s difficult to get your head around without the benefit of dissection,” Dr. Drake says. “Technology has its place. What is important is to figure out how it works best and to use it where it has the biggest impact.”

Rebecca Lufler, PhD, Chair of the Educational Affairs Committee of the



Blending traditional anatomy instruction with advanced technology also benefits medical students like Dylan Lescure of the MD Class of 2019.

American Association of Anatomists, says the continuous growth in medical technology and the introduction of programs like CHA highlights a need in the field.

“I think there is a great need for teachers of anatomy in all programs — from allied health to medical school to undergraduate,” she says. “The more anatomists we can train, the better.”

Especially since the field is quickly changing, she says.

A classically trained anatomist, Dr. Lufler now teaches anatomy at Tufts University School of Medicine in a high-tech lab that integrates radiology with traditional anatomy.

From textbooks and apps to web-based learning and imaging, human anatomy courses have taken a big step into the technological age.

“Using technology to assist traditional anatomy only enhances the experience,” Dr. Elzie says. “It allows our students to learn things in a more three-dimensional aspect and have a little bit more control over that.”

That integration of technology is a centerpiece of the CHA curriculum — not to replace cadaver dissection, but to complement it.

“The actual experience of dissection is not replaceable,” Dr. Elzie says. “Instead, this is a whole new level of learning that targets the millennial learner.”

Learners like Aaron Magana, CHA Class of 2017, who was surprised at the diverse opportunities provided by the CHA program.

An aspiring future doctor, Mr. Magana was recently accepted to an osteopathic medical school and will begin classes shortly after graduating from EVMS.

“I don’t think I could have gotten that far without this program,” he says.

Fellow CHA classmate Jonathan Krimsier agrees.

“If you like medicine, but don’t want to practice it, this is a great place to start because it will expose you to all the other avenues involved with medicine, be it education or anything else behind the scenes,” says Mr. Krimsier, who hasn’t yet decided where his master’s degree will take him next. “I just know this is the first step on my road.” □

Aaron Magana and Helen Duenas, both of the CHA Class of 2017, use the virtual dissection table to enhance their anatomy training.



Human anatomy courses have taken a big step into the technological age.

MAN *of the* HOUR

Dr. L.D. Britt has been chosen for one of medicine's highest honors

It's 3:19 a.m. and L.D. Britt, MD, MPH, is starting his day. Not 3:18. Not 3:20. It's the exact time, he says, that works best for him.

He stretches. He says his prayers. Then he heads to the gym for some cardio. He will be at the hospital by 7 a.m. There will be little time for sitting or relaxing — not for him and certainly not for his surgical residents.

This is a pace he has perfected, and the 65-year-old surgeon doesn't plan on slowing down.

For example, on a recent Saturday afternoon, Dr. Britt, the Edward J. Brickhouse Chair in Surgery, the Henry Ford Professor of Surgery and Professor and Chair of Surgery, sat in a computer classroom taking an acute-care surgery certification exam. Most in the room were young enough to be his children.

There is no excuse note, even if you are credited with helping to create the specialty and authoring the textbook, he says.

The exam took six hours.

"You have to keep challenging yourself," Dr. Britt says. "I don't expect from anyone else what I am not willing to put forth and do myself."

Dr. Britt has never backed down from a challenge. As a child growing up in segregated Suffolk, his parents taught him that hard work and excellence were a must.

He attended the University of Virginia and while there, he asked advisers which medical school was the best in the country. They said Harvard.

"So I told myself that is where I will go," Dr. Britt says.

And he did. There he earned dual degrees from Harvard's medical school and school of public health.

Still, he always knew he would come home to Hampton Roads to give back to the community that helped shape him. Dr. Britt joined the EVMS faculty in 1986 and has served as Chair of Surgery since 1994. For the first 25 years of his career, he traveled to Suffolk every Tuesday to see patients who





L.D. Britt, MD, MPH

Dr. Britt was one of only 70 new members elected to the National Academy of Medicine this year and the only physician from Virginia.

“Dr. Britt is one of the most influential leaders in all of American academic medicine.”

Timothy Eberlein, MD



couldn't make it to Norfolk. He even made home visits to his former schoolteachers.

“I like to be able to say that EVMS is a school without walls, that we are truly embedded in the community,” Dr. Britt says. “We live and breathe our motto.”

It is a motto that has both inspired and driven him throughout his highly recognized career.

Dr. Britt has received numerous awards for his outstanding contributions to medical education. He was the first African-American in the nation to have an endowed chair in surgery, and he has held several leadership positions, including Director on the American Board of Surgery, past Chair of the Board of Regents of the American College of Surgeons and past President of the American College of Surgeons.

But in October, Dr. Britt earned a distinction like no other. He was the first faculty member from EVMS ever to be elected to the National Academy of Medicine (NAM) — considered one of the highest honors in the fields of health and medicine.

Established originally as the Institute of Medicine in 1970 by the National Academy of Sciences, NAM addresses critical issues in health, science, medicine and related policy.

Dr. Britt was one of 70 new members

and the only physician from Virginia elected to NAM this year. Within NAM's 2,000 members elected over more than four decades, Dr. Britt is the first acute-care specialty surgeon.

Of the more than 850,000 practicing physicians in the United States, fewer than 1 percent are elected to NAM.

“Dr. Britt is the consummate surgeon, leader, scientist and academician who has advanced the field of surgery and medicine at EVMS, the nation and beyond,” says Richard Homan, MD, President and Provost of EVMS and Dean of the School of Medicine. “He is beloved as a medical educator and role model and has served as a mentor for hundreds of medical students, residents and faculty at EVMS and countless other academic health centers.

“We are so proud and fortunate that he started his academic career at EVMS and continues to serve as our Chair of Surgery. Through his work, he has indeed changed the world.”

Timothy Eberlein, MD, the Bixby Professor of Surgery and head of the department of surgery at Washington University School of Medicine, praises Dr. Britt's work in academic medicine, calling him “one of the most influential leaders in all of American academic medicine.”

Dr. Eberlein, a member of the Board of Regents of the American College of Surgeons (ACS), says that through his leadership with the ACS, Dr. Britt helped establish new paradigms of surgical training; championed the utilization of risk-adjusted outcome measures for physician performance; was a strong advocate for inclusion of women and minorities in leadership positions; and helped mobilize considerable resources to reduce the burden of disease in underserved communities across the U.S.

“It is rare in any professional endeavor to see firsthand such an unparalleled leader,” Dr. Eberlein says. “Dr. Britt has had an enormous and lasting impact on virtually every aspect of American surgery.”

But for Dr. Britt, the NAM election is less about him and more about the institution that he calls home.

“This is a testament to the great things being accomplished here at EVMS,” Dr. Britt says.

“We are a young medical school, but we are making a difference in healthcare, research and education, and people are taking note of that.” □



Learn more about Dr. Britt in evms.edu/digitalmagazine.

EVMS IN SPACE

In 1994, research scientist Dorothy Spangenberg, PhD, worked with NASA to send 20,000 microscopic jellyfish into orbit around Earth. The experiment sought to determine if the fast-growing jellyfish “polyps” could develop normally in the microgravity of space. As it turned out, 18 percent of the polyps had abnormalities while only about 3 percent of control jellyfish experienced the same problems. The results may have implications for humans if and when children are born in space in the future. Today, EVMS’ research ties with NASA continue as our scientists study the radiation risks for astronauts.





Dr. Alison Boyce says her EVMS education prepared her to be a good clinician.

Patients with rare disease turn to EVMS grad now at NIH

Though rare diseases affect just a small part of the population, Alison Boyce, MD (MD '06), says researching them can lead to advances in medical science that will benefit everyone.

“RESEARCH IN RARE DISEASES TEACHES US A LOT ABOUT

biology and medicine in general,” says Dr. Alison Boyce, a pediatric endocrinologist and research physician with the NIH Section on Skeletal Disorders and Mineral Homeostasis. “Most rare diseases result from a single gene mutation. Understanding how and why these mutations cause diseases can give us valuable information about biological pathways in the body and increase our understanding of normal physiology.”

Much of Dr. Boyce’s work is focused on fibrous dysplasia/McCune-Albright syndrome (FD/MAS), a rare bone disorder typically diagnosed in early childhood. Caused by a genetic mutation, the condition affects skin pigmentation, hormone production and bone growth. There is no cure.

Hopeful for treatments to minimize its pain and debilitating effects, patients with the disease come from all over the world to see Dr. Boyce and her colleagues at the NIH Clinical Center. Dr. Boyce is the principal investigator on a natural history study

for FD/MAS and is helping plan a clinical trial to test the drug denosumab on adults. She also trains other healthcare providers — particularly pediatricians — to identify symptoms in very young children.

“It’s a tricky disease [to diagnose],” she says, “but there’s really an opportunity to treat it effectively if you can identify very early the kids who are affected.”

Dr. Boyce is grateful to EVMS for enabling her to meet her husband, Peter Tait, MD (MD ’04), now a hospitalist in Washington, D.C., and for the school’s emphasis on clinical experiences and community service. Today, she volunteers

as a clinician in the Bone Health Clinic at Children’s National Health System and works with the Fibrous Dysplasia Foundation and the MAGIC Foundation.

“EVMS was really essential in preparing me to be a good clinician and to approach the patient as a whole person,” Dr. Boyce says.

“Every time I see and counsel a patient with a rare disease, it makes the case that we desperately need better ways to diagnose and treat them. We’re most likely to make progress when researchers are closely connected to the patients and families affected by the diseases we study.” □



**MARK YOUR CALENDAR
NOW FOR THE**

2017 EVMS ALUMNI WEEKEND

October 20 – 22, 2017

FRIDAY:

Welcome Reception

SATURDAY:

**EVMS Alumni Chalet
at the Town Point Virginia
Wine Festival**

SUNDAY:

Campus Tours & Breakfast

**Visit evms.edu/alumni
for event details!**



As a researcher at the National Institutes of Health, Dr. Boyce focuses on a rare bone disorder and treats patients who seek her out from around the world.

Artist beats breast cancer with help from EVMS and Every Woman's Life



Artina Slaughter woke up in the middle of the night. She doesn't know why. But she sat up in bed and put her hand on her chest. She felt a lump.

It was probably nothing, she thought, but her sister convinced her to go to the ER.

She needed more tests, but without health insurance, she didn't think she'd be able to get them.

"I just really thought that was pretty much the end," Ms. Slaughter says. But she was

referred to Every Woman's Life, a CDC-funded program in which Sentara Healthcare, Bon Secours and EVMS Medical Group collaborate to provide cancer screenings for uninsured women in Norfolk and Portsmouth.

She received a free mammogram, and the program helped her qualify for Medicaid to

cover treatment at EVMS.

It was there, sitting in the office of EVMS' Dr. Eric Feliberti, that she learned her lump was actually breast cancer.

"I went through several stages of grief within five minutes," she says. "I felt like I was the only person on the face of the earth to get this diagnosis."

Dr. Feliberti and his nurse calmed her down. "He just has a really awesome temperament," she says. "He was so calm and sweet; it was like I was somebody he knew."

Dr. Feliberti performed Ms. Slaughter's double mastectomy, and Dr. Lambros Viennas, also of EVMS, performed her breast reconstruction. Now, after chemotherapy and three years, she is cancer free.

"I couldn't have asked for better care," she says. "I'm grateful. I was never treated any differently than anybody who had regular insurance."

Ms. Slaughter also was impressed by the EVMS students she saw and enjoyed watching them learn. "They really had a good bunch of students," she says. "It was fantastic."

During her treatment, Ms. Slaughter expressed her feelings through her artwork. A seamstress and textile artist, she made a figure of a woman crouched in a fetal position and covered in 1920s-themed fabric that was bleached to represent the changes in her life. "I felt by myself even though I really wasn't," she says.

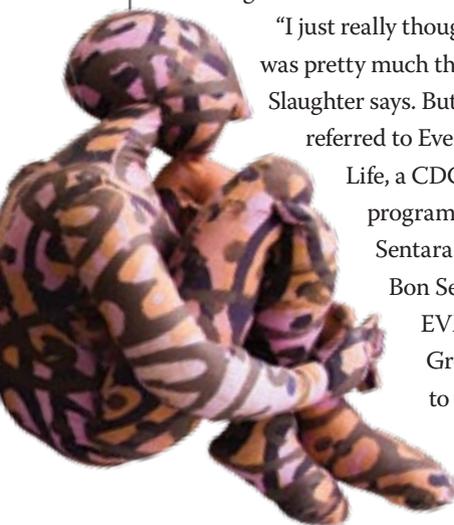
She also made a handbag, dyed purple and pink like bruises, hand-stitched like her surgery, and containing some of her lost hair. "It's like baggage, something you're holding onto."

It was therapeutic for her to pour her feelings into her artwork. "I was glad that I was able to express myself without being super obvious," she says. "Somebody could enjoy it for their own reasons, but I know exactly why I did it."

And she wants to remember what she went through. "I don't want to forget how fragile life is." □

Featured EVMS Physicians

Eric Feliberti, MD, Associate Professor of Surgery
Lambros Viennas, DDS, MD, Assistant Professor of Surgery



Creating textile artwork was therapeutic for Ms. Slaughter.



View a video of Artina Slaughter's story at evms.edu/digitalmagazine.

EVMS

Eastern Virginia Medical Center

Community Focus.
Impact.



Breakfast of champions ▲

U.S. Sen. Mark Warner spoke at EVMS in November during a Community Leaders Breakfast hosted by Richard Homan, MD, President and Provost of EVMS and Dean of the School of Medicine. The event enabled business leaders from around the region to learn more about the institution, tour the Sentara Center for Simulation and Immersive Learning at EVMS and even have a chance to talk with Sen. Warner.

◀ Super heroes

Spiderman faced off with Elias Siraj, MD, the David L. Bernd Distinguished Chair for Cardiovascular and Diabetes, Professor of Internal Medicine and Chief of Endocrinology and Metabolic Disorders at EVMS, to raise awareness of diabetes at a recent Norfolk Admirals hockey game.



View all of these photos and more at evms.edu/digitalmagazine.

OUR VISION: Eastern Virginia Medical School will be recognized as the most community-oriented school of medicine and health professions in the United States.

Have you checked EVMS PULSE?

Get all of your EVMS news in one place

- research breakthroughs
- academic accomplishments
- campus life
- health headlines
- featured videos
- interviews and more



evms.edu/PULSE

The screenshot displays the EVMS Pulse website interface. At the top, there's a navigation bar with the EVMS logo and the date 'Tuesday, November 29'. The main content area features a large infographic titled 'EXPOSED WHAT YOU SHOULD KNOW ABOUT DIABETES'. The infographic includes a map of Virginia with a red arrow pointing to the Southeastern region, which has a 12.6% prevalence rate. Other statistics shown include 6.9% for the United States and 9.8% for Virginia. Below the infographic, there are several news articles with images and headlines. One article is titled 'Cut nearly 1,600 calories from your Thanksgiving feast' and features an image of a Thanksgiving meal. Another article is 'OnSite Fitness teams up with EVMS to beat diabetes'. There are also social media icons on the right side of the page.