

# EMORY | nursing

SPRING 2016

## *Protecting* **mothers & babies**

A new center looks at environment, the microbiome, and preterm birth among African Americans

Ebony Foreman-Broaddus  
and her daughter Eden

## FROM THE DEAN

# Making history—again

**OUR SCHOOL IS DEFINITELY ON A ROLL.** In March, we were ranked No. 8 by *U.S. News & World Report*, our highest ranking to date. Last year, our faculty garnered \$14.3 million in research funding, the highest amount in school history. We're also ranked No. 4 in NIH research funding among nursing schools.

Last fall, we established the first federally funded children's environmental health center based in a school of nursing and focused on the microbiome. The new Center for Children's Health, the Environment, the Microbiome, and Metabolomics (C-CHEM<sup>2</sup>) builds on our ongoing research to understand why African American women experience a higher rate of preterm birth than Caucasian women. C-CHEM<sup>2</sup> researchers, who specialize in nursing, public health, medicine, and psychology, believe the cause may be rooted in how the environment affects the microbiome of pregnant women, which in turn may affect the neurodevelopment of their infants.

In the United States, it's widely accepted that being an African American woman does negatively affect birth outcomes. We know that maternal stress is a contributor, and it does not matter if a woman is rich or poor. But could their environment be a factor? Is there something in the air they breathe, the food and water they consume, the products they use on their bodies and in their homes that contributes to preterm birth?

At the heart of C-CHEM<sup>2</sup> is a growing partnership between Emory researchers and Atlanta's African American community to find the answers. By working together, we can magnify the voices of women and children to change environmental health policies and develop nursing interventions to improve health.

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**Linda A. McCauley** 79MN PhD RN FAAN FAAOHN  
Dean and Professor  
Nell Hodgson Woodruff School of Nursing

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## We're No. 8!

The School of Nursing ranked 8th in *U.S. News & World Report's* 2017 edition of "America's Best Graduate Schools."

This latest ranking is the highest ever for the school, which ranked 10th last year. Emory remains the top-ranked nursing school in Georgia and the No. 2-ranked nursing school in the Southeast. Its family nurse practitioner program now ranks 10th in the nation.



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**On the Cover:** Ebony Foreman-Broaddus and her daughter Eden are helping shed light on how the microbiome affects their health. *Photo by Bryan Meltz*

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# Environment, the Microbiome, and Preterm Birth

A new center zeroes in on the **complexities affecting the health of African American mothers and children** in the urban Southeast

By Pam Auchmutey

**Ebony Foreman-Broaddus** participated in a School of Nursing study looking at how biobehavioral risk factors may disrupt the microbiome and cause preterm birth. "If I can help somebody figure out why preterm births and infant deaths occur, I'm all for it," says Broaddus, shown with her daughter, Eden, at their home in Conyers, Georgia.

**E**bony Foreman-Broaddus knows she is fortunate. She and her husband served with the Marines in Iraq before they married. They now enjoy a comfortable life in Conyers, Georgia, where they are raising two sons, ages 8 and 6, and a daughter, age 1. All are healthy and were born full term.

Broaddus is well aware that other African American women often experience adverse birth outcomes. Women in her racial group have a 1.5 times higher risk of preterm birth than Caucasian women, a statistic that makes preterm birth the leading cause of infant mortality in the African American population. While pregnant with her daughter, Broaddus enrolled in a School of Nursing study examining the underlying causes of preterm birth among some 500 pregnant African American women in metro Atlanta. The study, and research in general, are important to her.

“If I can help somebody figure out why preterm births and infant deaths occur, I’m all for it,” says Broaddus. “My sister passed away from SIDS [sudden infant death syndrome] when she was a few months old, so I want to do anything I can to help. I know a lot of African American women who have this notion that they don’t need to participate in research. When things happen to them they will say, ‘why wasn’t I told about this or why didn’t I know about this?’ We all need to expand our mindset and open our eyes to learn why certain things happen to us and our children.”

Specifically, Broaddus is helping researchers understand how biobehavioral determinants—the biological, social, behavioral, and environmental factors of health—influence the microbiome of African American women during pregnancy and whether disruption of the microbiome—the trillions of microbes that populate the body—may cause preterm birth.

To date, nearly 300 expectant mothers ages 18 to 35 have enrolled in the longitudinal study, led by nursing researchers Elizabeth Corwin PhD RN FAAN and Anne Dunlop MD MPH and funded by the National Institute of Nursing Research. Participants agree to provide biological samples—via oral, vaginal, and rectal swabs and blood draws—during two prenatal clinic visits (at eight to 14 weeks and 24 to 30 weeks of pregnancy) at Grady Memorial Hospital or Emory University Hospital Midtown. Data also are collected from their medical records after their babies are born.

Researchers are analyzing the women’s samples in Emory laboratories to characterize the structure and dynamics of the vaginal, oral, and gut microbiome in order to determine which microbiome patterns may be linked to preterm birth. And they are identifying how biobehavioral determinants affect each microbiome during pregnancy.

Launched in 2014, the maternal microbiome project has yielded



preliminary data for more than 250 women, with microbiome analysis completed for 50 women. To date, there has been a study retention rate of nearly 90 percent during pregnancy and a preterm birth rate of 15 percent. At least half of these women have experienced childhood trauma, such as family disruption, emotional or sexual abuse, and neglect. Income levels range from low to high.

“We’re learning that this is a very high-risk group of women,” says Corwin of the cohort.

The maternal microbiome study led by Corwin and Dunlop will yield results in other ways. It forms one pillar of a new children’s environmental health center involving four Emory University units—the School of Nursing, Rollins School of Public Health, the School of Medicine and Emory College of Arts and Sciences.

Formed last fall, the Center for Children’s Health, the Environment, the Microbiome, and Metabolomics (C-CHEM<sup>2</sup>) is gearing up to study factors affecting the environment of fetus and child and their impact on birth outcomes and the microbiome and neurodevelopment of infants.

One of 15 children’s environmental health centers in the nation and the only one in the Southeast, C-CHEM<sup>2</sup> is the first such center to be based in a nursing school and to focus on the microbiome. Funding support comes from the National Institute of Environmental Health Sciences.

When the federal agency issued a call for proposals to study children’s environmental health with an emphasis on disparities, Linda McCauley, dean of the School of Nursing, and Barry Ryan PhD MS, professor of environmental health at Rollins, began talking. Both are experts in conducting community-based research on exposures to environmental toxicants and serve as dual principal investigators for C-CHEM<sup>2</sup>.

“Dr. Ryan pulled a lot of people together to talk about submit-



A team of School of Nursing researchers assess Tiunca Cameron’s infant daughter, Tykeriah, at her home in Atlanta. The mother and daughter (top middle and right) are participants in related studies examining how the microbiome affects their health.

ting a proposal, and it soon became clear that we were the program with a pillar study already in place,” Corwin explains. “We had a cohort of pregnant African American women who had delivered or were about to deliver and a pending follow-up study of their infants that fit the children’s health center concept well. From that point on, everything came together and the C-CHEM<sup>2</sup> team was formed.”

“Health disparities start prenatally or even preconceptionally,” adds Dunlop, who is using the same cohort to study the epigenetics of preterm birth with School of Medicine colleague Alicia Smith PhD. “It’s critical to initiate the investigation of the factors shaping child health disparities in the womb as early as possible during pregnancy.”

#### An understudied population

As the researchers point out, prior studies have shown that urban minorities are at elevated risk for environmental exposures and adverse birth, health, and developmental outcomes. But none has characterized environmental exposures among residents in the urban Southeast, regarded by researchers as distinct in terms of housing, climate, traffic, diet, culture, and racial/ethnic makeup. Atlanta’s African Americans embody those characteristics.

C-CHEM<sup>2</sup> will zero in on this population by leveraging data

generated by the maternal microbiome study in the School of Nursing and the laboratory resources of the HERCULES Center (Health and Exposome Research Center: Understanding Lifetime Exposures) at Rollins. Led by Parkinson’s disease expert Gary Miller, HERCULES is the first research center in the nation to measure the exposome—the cumulative impact of lifelong environmental exposures on health. Women in the maternal microbiome study, along with their infants in a related follow-up study, will help characterize these lifetime exposures and their effects.

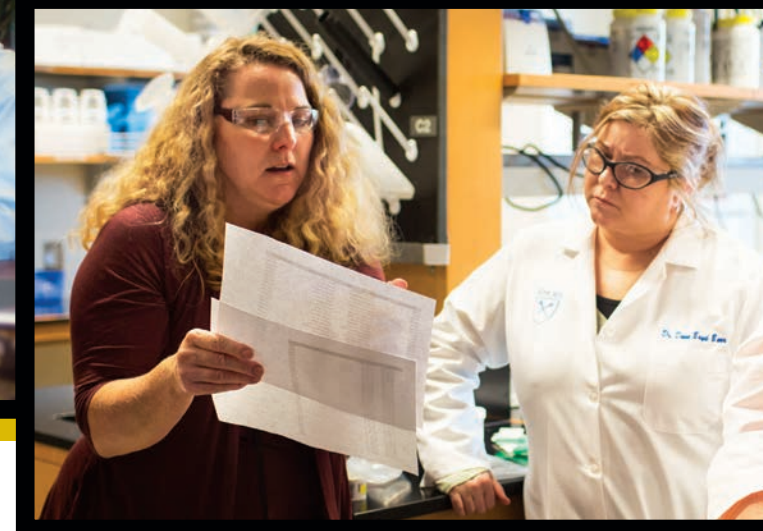
The infant microbiome study, funded by the National Institute of Minority Health and Health Disparities and co-led by Corwin and Emory College psychology professor Patricia Brennan PhD, is examining how chronic maternal stress and disadvantage may affect the microbiome-gut-brain axis of infants.

The investigators are looking for possible links between maternal stress during pregnancy and the composition of the maternal and infant gut microbiomes and whether their composition affects the cognitive and social-emotional development of babies.

Their study relies on samples collected from women in the



Above: PhD student Jordan Murphy prepares blood samples in the nursing school's biobehavioral lab. Right: Linda McCauley (nursing) and Barry Ryan (public health) are dual principal investigators of C-CHEM<sup>2</sup>.



Above center and right: Nursing school faculty and students prepare kits used to collect biological samples from mothers and babies. Left: Anne Dunlop (nursing) confers with Dana Boyd Barr (public health) in the leader lab at the Rollins School of Public Health.

maternal microbiome study and infant samples collected by researchers during five home visits beginning one week after birth and ending at 18 months.

“Many factors that influence the microbiome are modifiable,” says Corwin. “These may include changing your diet or avoiding use of a certain type of perfume or household cleaner. Once we know what behaviors are beneficial, we can develop interventions to minimize risk. The knowledge gained from these studies holds tremendous potential for promoting the health of the next generation of African American families.”

### Exposures in the home

C-CHEM<sup>2</sup> shares that potential as researchers conduct three related environmental exposure projects using biological samples from the maternal and infant microbiome studies as their foundation.

CHERUB (Characterizing Exposures and Outcomes in an Urban Birth Cohort), the first project, will characterize the environmental exposure of mothers and their infants, based on serum and urine samples collected from women during their prenatal visits. Researchers also will visit their homes to collect infant blood and urine samples and dust and air samples. All of these samples will be analyzed in the leader lab under the direction of Dana Boyd Barr PhD, the analytical core director for HERCULES, and Dunlop.

Project leaders and staff will examine samples for the presence of air pollutants and chemicals that women and children may be exposed to in the home. Their list includes phthalates (found in perfumes, fingernail polish, house paint, and time-release medica-

tions), bisphenol A or BPA (the plasticizer that lines food cans), perfluorinated chemicals (in pizza and microwave popcorn packaging), brominated flame retardants or BFRs (used in electronics, plastics, and textiles), parabens (antimicrobials), and pesticides.

All of the samples collected will be analyzed using mass spectrometry, which will measure the concentration of each chemical to which each woman is exposed.

Granted it's widely known that BFRs disrupt hormone production in the thyroid and that pesticide exposure during pregnancy has been linked to neurodevelopment deficits in infants. So why study them again?

“The impetus for this project is that we don't know much about these types of exposures in the Southeast,” says Barr. “And there's no other center looking at them in the Southeast. It's an ideal opportunity to understand what African American women in this cohort are exposed to and also determine the most relevant exposures.”

### Exposures and infant development

Jeannie Rodriguez PhD RN C-PNP/PC has been a pediatric nurse for 20 years. As a junior faculty member in the School of Nursing, she is intent on expanding her research skills to study health problems in vulnerable children. C-CHEM<sup>2</sup> affords her that op-

portunity by working with mentor Patricia Brennan on the center's second project, called MEND (Microbiome, Environment, and Neurodevelopmental Delay), to determine how prenatal and postnatal toxicant exposures influence the infant gut microbiome and neurodevelopment and behavior during the first 18 months of life.

Researchers are just beginning to follow the cohort of African American mothers as they begin to deliver their infants. They will evaluate infants in the home by assessing their cognitive and social-emotional development and collecting blood and stool samples to evaluate environmental exposures and characterize gut microbiome composition.

This project, researchers say, will deepen their understanding of the complex relationships between infant microbiota and environment. It may also help explain why some individuals are more susceptible to environmental exposures than others and thus revolutionize current approaches to toxicity testing.

As a psychologist, Brennan is interested in the specific factors that contribute to prenatal risk among African American women. Maternal stress is high on the list.

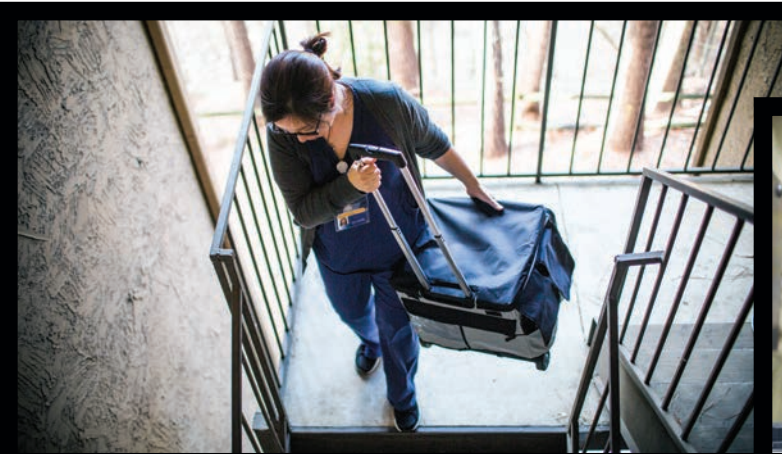
“The primary aim of our project is looking at the impact

of stress and toxicant exposures on infant neurodevelopment,” Brennan says. “The microbiome may be an important risk mechanism because it influences development of the brain, the immune system, and other functions. They're all tied together in the gut-brain axis.”

In time, MEND's results may influence nursing practice. “A big role in nursing is assessment and screening. In pediatrics, we focus a lot on health promotion and disease prevention,” says Rodriguez. “Understanding how prenatal and postnatal toxicant exposures influence health could eventually guide us in what to screen for and modify in order to promote more optimal health outcomes in childhood and beyond.”

### Metabolic pathways and preterm birth

At the heart of C-CHEM<sup>2</sup> is the desire to understand why so many African American women experience preterm birth. The field of metabolomics is key to understanding why this happens. It allows scientists to look at the chemical reactions that take place in the body. By measuring metabolic pathways in tissues



Above and right: Postdoctoral fellow Irene Yang makes a home visit to collect samples and data from Precious Leeks for the maternal microbiome study, which currently involves about 300 pregnant African American women in the Atlanta area.

Above: Dean Jones (medicine) will map the metabolic pathways of mothers and their infants. Above right: Priya D'Souza (public health) analyzes environmental samples. Right (L-R): Patricia Brennan (psychology) and Jeannie Rodriguez (nursing) will look at how environment affects infant neurodevelopment.

and cells, scientists can pinpoint disturbances—or biomarkers—that indicate health or disease risks.

A third center project, known as MATRIX (Metabolomic, Microbiome, and Toxicant-Associated Interactions), will use high-resolution mass spectrometry to map the metabolic pathways of mothers and their infants. These data will be used to determine which biomarkers (disrupted pathways) are associated with preterm births and cognitive disorders in young children.

Dean Jones PhD, director of the Clinical Biomarkers Laboratory in the School of Medicine, and Corwin, a physiologist and family nurse practitioner, are partners on the project, which ultimately could lead to new screening and intervention methods to prevent preterm births and adverse brain outcomes for infants specific to the African American population.

Jones pioneered development of the ultra high-resolution metabolomics platform to provide detailed data on environmental as well as dietary, infectious, behavioral, and stress-related exposures. High-resolution metabolomics provides the foundation for establishing a cumulative record of these exposures. The technology used in the Clinical Biomarkers Laboratory allows scientists to analyze the 20,000 chemicals present in a drop

of blood with relative ease. Essentially, MATRIX will provide a metabolic profile for every study participant in C-CHEM<sup>2</sup>.

“In our analysis, we will look at chemicals that are present and identify whether they are derived from food, the microbiome, or the environment,” Jones says. “We’re not targeting any of them. We’re seeing what’s there.”

Based on that data, MATRIX will look for associations between environmental and microbiome factors with preterm births and infant neurodevelopmental outcomes.

“This project is addressing the high frequency of preterm births among African Americans in urban Atlanta,” says Jones. “This study will help determine if it’s caused by environmental factors that we can identify. If that’s the case, then we have an opportunity to do something about it—to change policies to implement practices to try to correct the problem.”

Not everyone exposed to a particular risk factor will experience adverse health effects or disease, notes Corwin. “Metabolomics is a way to more precisely identify those who are adversely affected by an exposure without waiting for an outcome or disease to occur.”

### Community-driven science

Once babies learn to crawl, they scamper across carpets that contain protective chemicals or floors that bear traces of dust no matter how clean. They check things out by putting fingers and items of interest in their mouths. When held in their mothers’ arms, they may drink from a plastic bottle and wear a sleeper treated with a chemical flame retardant.

Maeve Howett PhD APRN CPNP-PC IBCLC CNE knows these hazards all too well. She teaches nursing students about environmental health and serves with the Southeast Pediatric Environmental Health Specialty Unit, which educates families, communities, and health care providers about how to protect children from environmental exposures. Howett also leads the C-CHEM<sup>2</sup> Community Outreach and Translation Core (COTC) in collaboration with Melanie Pearson PhD, director of research projects in the Department of Environmental Health at Rollins.

In January, Howett and Pearson convened the first meeting of the COTC Stakeholder Advisory Board. Its members include representatives from Atlanta-area nonprofit groups that serve African

American women, children, teens, parents and grandparents; local public schools; and Morehouse School of Medicine.

“Our study population of interest is urban African American women of child-bearing age, so it’s important that we reach out to that community,” Howett says of the COTC. “The west side of Atlanta has an exceptionally high rate of preterm birth that is unacceptable to us. We want our advisory board to tell us what our scientists should study and the best ways to share what we learn.”

The COTC, says Barry Ryan, is a two-way street. “We listen to community members. They listen to us. We give them feedback. They give us feedback. And in both cases, we learn something.”

### The next frontier

In the long run, C-CHEM<sup>2</sup> has the potential to change health care. It’s already changing nursing education, given the number of graduate students who are involved in C-CHEM<sup>2</sup> projects.

Sheila Jordan 10MPH 11N is a PhD student who is helping collect samples from pregnant women during their prenatal visits at Emory Midtown. She plans to study a subset of these women who have hypertension disorders for her dissertation. Thanks to the maternal microbiome study, she has an opportunity to connect with a research population that typically is hard to reach.



Above left: Community members gather for their first C-CHEM<sup>2</sup> advisory board meeting. Right and far right: Barry Ryan, Linda McCauley, and Maeve Howett welcome them. Above right: Ebony Foreman-Broaddus, shown with her daughter Eden, would like to see more African American women take part in health research studies.



“It’s very hard to recruit pregnant women,” says Jordan. “Recruiting African American women who are pregnant can be an even greater challenge. I found a diamond in the rough. I couldn’t have asked for anything better.”

“What this study brings to the table that others have lacked is a connection between what happens during a pregnancy and subsequent newborn development,” she adds. “We’re able to pull a lot of psychosocial and biological variables from the pregnancy and see how they affect infant outcomes. That’s a research gap that’s been missing in the maternal-child literature.”

C-CHEM<sup>2</sup> projects also underscore the need for nurse clinicians to stay abreast of new frontiers in science. “Being the trusted cornerstone of health care, nurses have to be on top of this,” Jordan says. “We’re the ones patients turn to for information.”

That’s exactly what School of

Nursing faculty members like to hear, especially Dean Linda McCauley.

“The reason I wanted this center so much is to make environmental health the fabric of the work of all the nurses who graduate from Emory,” she says. “I want it to become part of how they interact with all of their patients. I want them to have an in-depth understanding of how important it is to decrease our exposures to air pollution and other exposures that we know can harm health. My hope is that we can sensitize nurses and physicians to do more of this work. Quite simply, they are the ones who interface with the community.” **EN**

**LEARN MORE**  | Watch a video of C-CHEM<sup>2</sup> at [bit.ly/C-CHEM-video](http://bit.ly/C-CHEM-video).

Also visit the C-CHEM<sup>2</sup> website at [bit.ly/C-CHEM-nursing](http://bit.ly/C-CHEM-nursing).

## C-CHEM<sup>2</sup> AT A GLANCE

**PURPOSE:** The Center for Children’s Health, the Environment, the Microbiome, and Metabolomics (C-CHEM<sup>2</sup>) examines how environmental exposures affect infants during pregnancy and after birth. Specifically, C-CHEM<sup>2</sup> researchers are studying the complex interactions of toxicant exposures, the microbiome, and the metabolome and their impact on birth outcomes and infant health and neurodevelopment among African American mothers and babies in Atlanta.



**FOUNDATION:** Two ongoing pillar studies form the bedrock of C-CHEM<sup>2</sup>.



**PILLAR 1:** Led by the School of Nursing, the maternal microbiome study looks at how biobehavioral risk factors disrupt the maternal microbiome and in turn increase the risk of preterm birth among African American women. A related study looks at how chronic maternal stress and disadvantage affect the microbiome-gut-brain axis of their infants. The studies involve pregnant women and their babies in metro Atlanta.



**PILLAR 2:** The HERCULES Center at Rollins School of Public Health provides the laboratory resources and expertise needed to analyze biological and environmental samples for C-CHEM<sup>2</sup> projects. HERCULES specializes in studying the exposome—the cumulative effects of lifelong environmental exposures on health.



**PROJECTS:** C-CHEM<sup>2</sup> researchers are undertaking three related projects that draw from both pillar studies.



**PROJECT 1:** CHERUB (Characterizing Exposures and Outcomes in an Urban Birth Cohort) will characterize the environmental exposures of mothers and infants using their microbiome samples and environmental samples collected in the home.



**Project 2:** MEND (Microbiome, Environment, and Neurodevelopment Delay) will determine how environmental exposures influence the infant gut microbiome and the neurodevelopment and behavior of infants during the first 18 months of life.



**Project 3:** MATRIX (Metabolic, Microbiome, and Toxicant-Associated Interactions) will identify the metabolic pathways related to environmental exposures before and after birth and how these pathways influence the maternal and infant microbiomes, birth outcomes, and infant neurodevelopmental and behavior.



**COMMUNITY PARTNERS:** The Community Outreach and Translation Core (COTC) partners with local groups to ensure that research is relevant, accessible, and culturally appropriate. COTC members include C-CHEM<sup>2</sup> researchers and representatives from Atlanta-area schools and organizations that serve African American women and families. C-CHEM<sup>2</sup> scientists look to the COTC to inform their research and determine the best ways to share study results with Atlanta’s African American community.

# Start Making Sense

How diet may alter the gut microbiome, maternal health, and birth outcomes

By Laura Raines

**T**he human microbiome—the 100-trillion-cell community of microorganisms that live on and in the human body—is the new frontier for medical research. One of the pioneers dedicated to exploring how diet alters this invisible realm, which in turn affects health, is research assistant professor Erin Poe Ferranti, an Emory nursing alumna who never expected to become a scientist.

“I always wanted to work in academia and teach, but adding research to the mix came as a surprise,” says Ferranti 96Ox 98N 01MN/MPH 13PhD. “Had I known my career would take me to this point, I’d have done a lot of things differently 17 years ago.”

Yet each step of her nursing journey led to her current research endeavor. As a new RN, Ferranti worked in acute care with kidney and liver transplant patients who had pancreatic and renal disease. “Taking care of very sick patients made me aware early on that I wanted to work on the prevention side of health care,” she says.

That awareness led to a dual master’s degree in nursing and public health and a role as assistant chief nurse with the Georgia Division of Public Health, where she managed a nursing quality improvement initiative throughout the state. “Public health is my heart and my passion,” she says. “I love that so much of the focus is on maternal and child health and the prevention of chronic disease.”

The lack of solid content in the nutrition field took Ferranti back to Emory to begin a PhD centering on diet and maternal health. Her reasoning: “Nurses and other practitioners need better information about what keeps people healthy and better tools to advise patients on diet.”

In reviewing the literature, she found that women with gestational diabetes (GDM) were underserved. Although these women are closely monitored during pregnancy, they often fall off the radar after delivery.

Knowing that women with previous GDM are at risk of developing type 2

diabetes mellitus (T2DM) and metabolic syndrome (MetS), Ferranti focused her dissertation on diet quality and early postpartum cardiometabolic risk after pregnancy affected by GDM. She found that women who had higher confidence in eating healthfully were more likely to have higher diet quality. Studies with larger sample sizes showed that higher diet quality most certainly reduces the risk in women who had GDM during pregnancy.

By the time Ferranti completed her doctorate, microbiome research had exploded, and Emory nursing faculty were investigating this new frontier. She began working with mentors Anne Dunlop MD MPH and Elizabeth Corwin PhD RN FAAN on their study of the biobehavioral determinants of the microbiome and preterm birth among African American women in Atlanta.

“Preterm birth, a leading cause of infant mortality and severe health complications, is a major problem in this country,” notes Ferranti. “It affects about

10 percent of all pregnant women in the U.S. and the numbers are rising.”

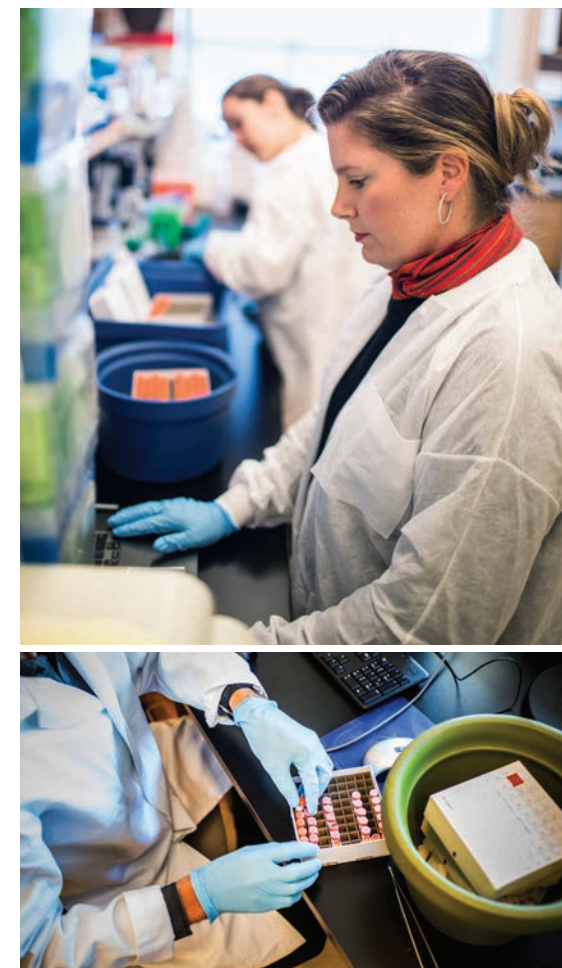
Until recently, researchers believed that the fetal intrauterine environment and the fetal gastrointestinal tract were sterile. But new evidence of microbes in the fetal environment suggests that the microbiome may evolve sometime during fetal development. The neonatal microbiome is further influenced by delivery type (vaginal versus C-section) and feeding type (breast versus bottle). There is growing evidence that the vaginal microbiome influences risk for preterm birth.

Other risk factors contribute as well, such as GDM, hypertension, preeclampsia, and maternal stress. One of the strongest factors is being African American. These women have a 1.5 times higher risk of preterm birth than Caucasian women. Emory is a leader in investigating this health disparity.

Given her passion for prevention, nutrition, and maternal health, Ferranti chose to study how diet quality affects the gut microbiome and cardiometabolic outcomes during pregnancy and postpartum among women involved in the Atlanta study.

“In the past, it has been hard to gather data on diet because people either over- or under-report what they eat,” she explains. “But if we can look at the microbiome and link it to certain diets, then we can know how to intervene and modify the diet to reduce adverse birth complications and improve infant health.”

Nutrition still lacks the attention it deserves in our health care system, Ferranti maintains. “It’s not rocket science to know that diet affects health, but new technology is allowing us to study exactly how what we eat affects the gut microbiome for better or adverse effects in pregnancy and the health of the population at large. Microbiome research provides us with another biomarker for assessing



Erin Poe Ferranti processes biological samples for her study of the gut microbiome and cardiometabolic outcomes during pregnancy and postpartum.

health, and that’s super exciting.”

A couple of years ago, Ferranti and colleagues published an article playing off news about the human microbiome in mass media. The article, “20 Things You Didn’t Know About the Human Gut Microbiome” published in the *Journal of Cardiovascular Nursing*, provided concise and important information for clinicians.

“There is growing evidence in associations between the microbiome and cardiometabolic issues that I felt CVD nurses

needed to know,” says Ferranti of the article. “I believe that diet is the main contributor in altering the microbiome, which both likely affect cardiometabolic disease risk.”

While the microbes she studies are invisible, the results she sees are tangible and real. “What sets nursing research apart is the close interactions between nurses and their patients,” says Ferranti. “My best research days are those spent talking with the pregnant moms in our study. It’s amazing how receptive they are to letting us collect samples (oral, vaginal, fecal, and blood) and how excited they are to participate, knowing that the study might not help them individually but may help others and contribute to a greater good.”

So far, her study is confirming that a plant-based, high-fiber, unprocessed diet is healthier. “Ultimately, I hope that we’ll learn how to design effective dietary interventions that will make a big difference,” she says. “Knowing that our research contributes to healthier moms is really motivating because if you can affect the behavior of the pregnant mom, you can affect the whole family.”

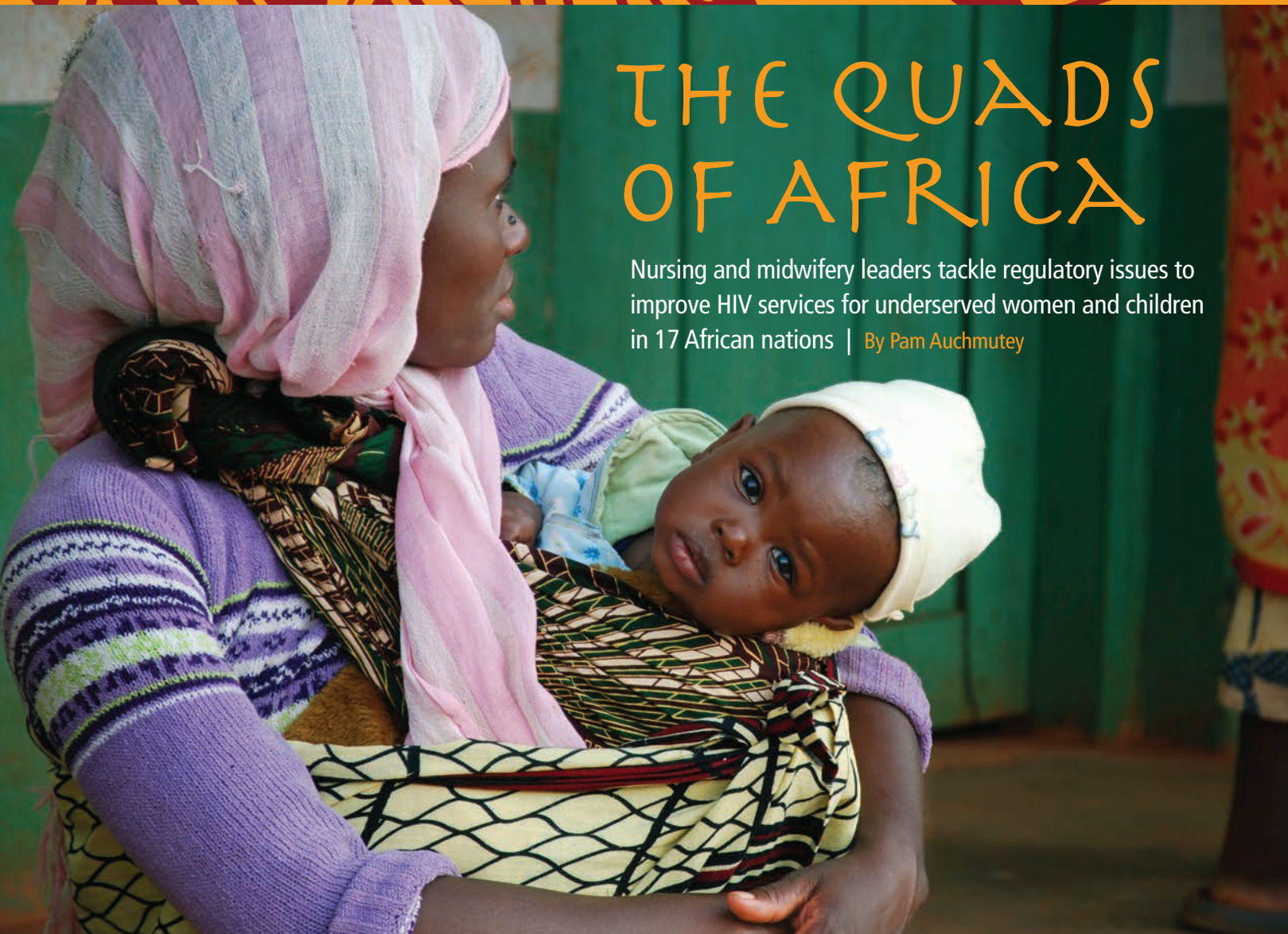
*The National Institutes of Health recently named Ferranti as a BIRCWH (Building Interdisciplinary Research Careers in Women’s Health) Scholar. BIRCWH is a career development program that connects junior and senior faculty who share an interest in women’s health and sex difference research. Anne Dunlop and Elizabeth Corwin serve as Ferranti’s mentors on her study of “Microbiome, Diet, and Persistence of Cardiometabolic Dysregulation in African American Postpartum Women,” sponsored by the NIH Office of Research on Women’s Health. EN*

**LEARN MORE** | Read Ferranti’s article on “20 Things You Didn’t Know about the Human Gut Microbiome,” published in the *Journal of Cardiovascular Nursing*, at [bit.ly/20-things-microbiome](http://bit.ly/20-things-microbiome).



# THE QUADS OF AFRICA

Nursing and midwifery leaders tackle regulatory issues to improve HIV services for underserved women and children in 17 African nations | By Pam Auchmutey



lian Carter Center for Global Health & Social Responsibility at the School of Nursing; the Centers for Disease Control and Prevention (CDC); the East, Central, and Southern Africa Health Community; the Commonwealth Secretariat (an association of 54 African countries); and the Commonwealth Nurses and Midwives Federation.

The idea for ARC originated with Peggy Vidot, a health adviser with the Commonwealth Federation, and Patricia Riley MPH CNM FACNM, an adjunct faculty member at Emory and health workforce expert at the CDC. They envisioned bringing teams of nurses together in each country to identify regulatory problems and develop strategies and solutions within a year.

Thus far, ARC has awarded 33 grants of \$10,000 each to teams in all 17 countries. Each team includes the nation's chief nursing officer, the registrar of the national nursing council,

gaps identified by PEPFAR. At the same time, countries around the world were still adjusting to new World Health Organization (WHO) guidelines, which called for pregnant women to begin ART as soon as they were diagnosed with HIV. Previously, pregnant women did not begin ART until their viral loads reached a certain level. The new regulations, issued by WHO in 2013, informed the next round of grant proposals from ARC members.

"When WHO recommended changes in how we approach pregnant women, it raised a lot of questions for ARC members," says Kelley. "Do you need pre-service or in-service education to bring nurses up to speed, or both? How do you target that population? Is your country going to go along with those recommendations? How do you inform nurses at the grassroots level about these regulations and how should they be



In February, **Maureen Kelley** (far left) traveled to Johannesburg, South Africa, for ARC's annual meeting, attended by nursing and midwifery leaders from all 17 ARC member countries (left). Kelley will continue to advise ARC, now jointly led by Emory nursing faculty members Kenneth Hepburn and Sydney Spangler.

(ARC photo by Jill Iliffe)

**By the end of 2013, 3.2 million of the world's children aged 15 and younger had HIV, 91 percent of them in sub-Saharan Africa. Children in Africa and elsewhere were 30 percent less likely to receive antiretroviral therapy (ART) than adults, UNAIDS and other health agencies reported.**

Improving care for these children is a key goal of the African Health Profession Regulatory Collaborative (ARC), a School of Nursing-based initiative to scale up HIV services by strengthening regulation of nursing and midwifery education and practice in 17 nations.

Three countries—Democratic Republic of the Congo, Côte d'Ivoire, and Cameroon—are the latest to join ARC, marking its expansion from East and Southern Africa into Central and Western Africa. Last year, ARC project leader Maureen Kelley PhD FACNM FAAN traveled to the continent half a dozen times to help advise ARC member countries on their respective projects.

As a result, nursing and midwifery leaders in Central and Western Africa launched initiatives to improve delivery of life-long ART (regardless of viral load) to prevent mother-to-child

transmission. And in the coming year, ARC members in all regions will undertake new initiatives in pediatric AIDS care at high-volume clinical sites. Their efforts will help close gaps in HIV services for pregnant women, infants, and children in accordance with targets set by the President's Emergency Plan for AIDS Relief (PEPFAR), the primary funding source for ARC.

When established by President George W. Bush in 2003, PEPFAR sought to make ART available to 1 million people in Africa by 2008. In its next five-year phase, PEPFAR called for continued testing and treatment for HIV in Africa and devoting more human resources to the mammoth task.

"Just using doctors was never going to achieve what they wanted—that everyone who was HIV-positive be treated and followed up," says Kelley. "In Africa, nurses make up 80 percent of the workforce. They needed supportive regulation and education to do that."

Thus ARC was formed in 2011 to coalesce nursing and midwifery leaders to solve regulatory problems in practice and education in their respective countries. Partners include the Lil-

the president of the national nurses association or union, and a leader from nursing academia. When the teams first formed, they nicknamed themselves "The Quads" and began meeting regularly to brainstorm and problem solve. That was a first, considering many had not worked together before, Kelley notes.

During the first three years of ARC, its members garnered grants for initiatives in nursing regulation to better align accreditation, licensing, scopes of practice, and continuing professional development (CPD) with regional and global standards.

As Kelley explains, "ARC focused on regulation to strengthen nursing on a national level that trickled down to what nurses are educated to do and able to do in the workforce." In Zambia, for instance, nursing leaders introduced CPD as a requirement for license renewal and initiated HIV-related CPD for nurses and midwives. Leaders in Seychelles reviewed and revised scopes of practice for nurses and midwives to include HIV and AIDS services.

During ARC's fourth year, the Quads shifted their attention to address the needs of pregnant women with HIV, one of the

implemented? That led our country teams to write grants to answer those questions."

Issues surrounding treatment of HIV-positive infants and children also were problematic. Babies born to HIV-positive mothers are often lost to follow-up since their HIV status is unknown for the first six to nine months. Countries in sub-Saharan Africa often lack the means to follow up with these children.

"In general, nurses were not comfortable treating HIV-positive children, including how to prescribe antiretrovirals for them and how to manage drug side effects," Kelley adds. "That mostly had been left in the hands of doctors."

This year, ARC will solicit grant proposals focused on removing barriers to treatment at high-volume clinical sites that serve mothers, infants, and children with HIV. New projects are likely to address task sharing with physicians, providing in-service education, quality improvement, mentoring, and more.

"Our goal," says Kelley, "is to make sure that nurses function at the highest level possible to obtain the most coverage for the women and children who need it the most." ■



## Schools partner to train nurse-midwives in rural Georgia

**Georgia has the highest maternal mortality rate and the eighth highest infant mortality rate in the United States.** Several years ago, Emory nursing dean Linda McCauley and the nursing dean of Valdosta State University (VSU) began to brainstorm about how to change this dismal picture.

There was little the nursing leaders could do about the rural hospital closings and physician retirements that forced pregnant women to travel long distances for care—or go without. They could, however, do something about the fact that many rural counties in central and south Georgia have few or zero nurse-midwives. In states with the highest percentage of nurse-midwives, these practitioners attend one in four births, building obstetric workforce capacity and improving outcomes for mothers and newborns.

To push the partnership forward, McCauley turned to Judith Wold PhD RN ANEP FAAN in the School of Nursing. As Distinguished Professor for Educational Leadership and director of the Farmworker Family Health Program in Moultrie, Georgia, Wold knows the state's rural areas well. She enlisted MaryJane Lewitt PhD CNM FACNM, coordinator of Emory's nurse-midwifery program, to meet with faculty at Valdosta State.

Emory has trained nurse-midwives for almost 40 years, producing 350 graduates who comprise the majority of the 500-plus nurse-midwives now licensed in Georgia. It has the only accredited, on-the-ground (not online) nurse-midwifery program in the Southeast and is highly ranked nationally. Many of its students are enrolled in the dual family nurse practitioner/nurse-midwifery program.

In fall 2014, Valdosta State established a seven-semester family nurse practitioner program. Now those graduates can pursue a postgraduate nurse-midwifery certificate program offered through Emory.

Enthusiasm for the proposed Rural Georgia Midwifery Education Project led to a \$24,600 award from the March of Dimes in 2015 to implement it and an endorsement from the Georgia legislature through the Women's Health Study Committee. Emory

will offer the new postgraduate nurse-midwifery certification program beginning in fall 2016.

The hybrid distance education program will combine classroom instruction, led by Emory faculty who will travel regularly to Valdosta State, and online coursework, enabling VSU students to combine work and study.

The most significant challenge to creating more nurse-midwives, notes Lewitt, is the lack of certified midwives available and willing to precept students during deliveries and other parts of their clinical training. Thus Lewitt and Wold are enlisting the help of midwives throughout the state, especially in critically underserved areas.

In time, says Lewitt, "This innovative public-private partnership will expand the number of nurse-midwives in Georgia, increase access to care for women in rural areas with significant disparities of health care, and, most important, improve Georgia's poor maternal and newborn health outcomes."—*Sylvia Wrobel*

**If you would like to precept a VSU nurse-midwifery student, please contact MaryJane Lewitt, Emory nurse-midwifery specialty coordinator, at 404-727-8301 or [mle Witt@emory.edu](mailto:mle Witt@emory.edu).**



Maria Lutes (left) and Abbey Schneidmiller founded the first pediatric wound and ostomy clinic in Washington state, aided by their Emory training. (photo by Russ Carmack)

## Nurse-run clinic specializes in pediatric wounds and ostomies

On average, pediatric nurse practitioners Abbey Schneidmiller and Maria Lutes see 75 new and returning patients a month in the Mary Bridge Pediatric Wound & Ostomy Clinic in Tacoma, Washington. Open since January 2015, it is the first clinic of its kind in the state and is housed within the pediatric surgery clinic at Mary Bridge Children's Hospital & Health Center.

Schneidmiller and Lutes, both ARPN CWON, staff the surgery clinic, where they saw a growing need to serve patients with wounds and ostomies. Their first step was to enroll in the continuing education program offered through Emory's Wound, Ostomy, and Continence Education Center (WOCNEC) at the School of Nursing. WOCNEC offers three program options,

including distance learning, which fit the Tacoma nurses' lives and schedules.

It also provided them with specialized skills and knowledge, such as deciphering which products best promote wound healing and minimize scarring. "We learned not to be overwhelmed by all of the products out there," says Schneidmiller. "It's a matter of going back to the basics. What is your wound and what is your goal?"

Today, the nurses manage a variety of conditions in their practice: complications from incontinence, surgical wounds, traumatic wounds, minor burns, treadmill burns, pressure ulcers, abscesses, road rash, abrasions, and more. They also take care of children with ostomies and any skin-related issues.

Word about the nurses' practice is spreading. A physician liaison is helping grow their patient base by meeting with local pediatricians and urgent care centers. The Mary Bridge Children's Hospital emergency room regularly refers patients.

"Pediatricians don't always feel comfortable managing wounds and ostomies, so providers and parents are grateful that we have this service to offer," Schneidmiller says. "Maria and I are really good nurses, and we wanted to make a difference. This is our avenue."—*Pam Auchmutey*

**To learn more or to register for the WOCNEC program, visit [bit.ly/WOCNEC-Emory](http://bit.ly/WOCNEC-Emory) or call 404-778-4067.**



## New course introduces undergrads to nursing

This spring, 25 students from Emory College of Arts and Sciences were the first to enroll in a course to explore the multifaceted roles of registered nurses and nurse practitioners in health care today.

"This course gives students a glimpse into careers ranging from pediatrics to forensics and emergency care," says Angela Amar PhD RN FAAN, assistant dean for BSN education in the School of Nursing.

Students enrolled in the "Introduction to Professional Nursing" course are learning from health care leaders and participating in patient care simulations at the School of Nursing. The course provides a preview of nursing careers early in their college journey that ultimately may help address the severe shortage of nurses in the U.S.

"Most students don't realize that nursing provides an infinite number of career opportunities," says Amar. "We need more nurses to deliver health care services to our population. This course puts Emory at the forefront of exposing more students to the nursing profession."



## School of Nursing ranks No. 4 in NIH funding

Last year was a banner year for School of Nursing research. In fiscal year (FY) 2015, research funding from external agencies totaled \$14.3 million, the highest amount ever awarded to Emory nursing researchers.

The School of Nursing also climbed substantially in the rankings of peer schools awarded research funding from the National Institutes of Health. Its NIH funding ranking jumped from No. 38 (\$1.9 million) in 2009 to No. 4 (\$6.2 million) for 2015. The No. 4 ranking represents the highest NIH funding total in school history.

When FY16 began last September, it marked a milestone for research professor Martha Rogers MD FAAP, who holds the longest-running grant in the School of Nursing. Since 2006, Rogers has led the Health Workforce Information Systems project in Africa, funded by the Centers for Disease Control and Prevention and the Association of Schools of Public Health since 2002. During that time, the project has aided Kenya and Zambia in developing electronic human resources information systems to better manage their health workforces to help stem the global shortage of nurses.

The workforce project is based in the Lillian Carter Center for Global Health & Social Responsibility, which Rogers directs. A pediatrician by training, Rogers is a renowned expert on HIV/AIDS in women and children. She also holds the School of Nursing record for the most publication citations.

## University president announces retirement

Come the end of August, James W. Wagner PhD will retire as president of Emory. A national search is under way to fill his post.

During his 12-year presidency, Wagner set in motion a campus-wide initiative to develop a clear vision statement, resulting in a 10-year strategic plan to strengthen the university at all levels, and led a \$1.7 billion fund-raising campaign, the largest in Georgia history. He also worked to enhance the student experience, grow research, and strengthen partnerships with academia, government, and industry.

Wagner often spoke of Emory's place in the world—one that seeks positive change. An example of this tenet played out publicly in 2014 when clinicians at Emory University Hospital successfully treated four patients



James W. Wagner

with the highly contagious Ebola virus.

In his message in the Winter 2015 issue of *Emory Magazine*, Wagner stated that he and other university leaders played no immediate role in the decision to accept the first two Ebola patients. The decision by Emory doctors was a matter of instinct.

"In the end," Wagner wrote, "our physicians, nurses, staff, and communications professionals not only earned the gratitude of patients and their families. They also demonstrated the power for positive transformation that is inherent in research universities."

## Lewin named Emory health sciences leader

Jonathan S. Lewin MD has begun his tenure as executive VP for health affairs, executive director of the Woodruff Health Sciences Center, and president, CEO, and chair of the Board of Directors of Emory Healthcare.

Prior to joining Emory in February, Lewin was senior vice president for integrated health care delivery and co-chair of strategic planning for Johns Hopkins Medicine. He also served as professor and chair of the Russell H. Morgan Department of Radiology and Radiological Sciences at Johns Hopkins

University and radiologist-in-chief at Johns Hopkins Hospital.

Regarded as a pioneer in interventional and intra-operative magnetic resonance imaging, Lewin has developed more than 20 patents and garnered more than \$10 million in federal and state grants. He is also a fellow of the International Society for Magnetic Resonance in Medicine and the American College of Radiology.

During his first few days on the job at Emory, Lewin noted a "palpable energy" throughout the health sciences center, including the School of Nursing.

"It's clear that we're on a trajectory that few other institutions can match," he



Jonathan S. Lewin

said. "We're not doing only health care delivery, only research, or only education. Because we have all three missions, and we value them equally, we're privileged to have a unique opportunity to serve humanity in a profound way and to make Atlanta, the region, the nation, and the world a better place."



Faculty, staff, students, and alumni celebrated with Darla Ura (second from left) when she retired. Ura pioneered simulation training in the School of Nursing.

expanded and named the Charles F. and Peggy Evans Center for Caring Skills in 2004, Ura oversaw its construction, including the addition of an observation and control room with one-way mirrors, video cameras, and enhanced technology.

She also taught numerous courses for BSN and MSN students and coordinated the nurse practitioner programs in adult acute care and adult-gerontology primary care. She garnered several awards for her efforts, including the Jean Thomas Award for Creativity in Teaching from Sigma Theta Tau International, the Emory Williams Teaching Award from the university, and the Teaching Scholar

Award from the School of Nursing.

Before joining Emory, Ura taught at other nursing schools, including Florida State University, where Sandra Dunbar PhD RN FAAN FAHA FPCNA served on the faculty.

"Darla always put students first," says Dunbar, associate dean for academic advancement at Emory's School of Nursing. "Her first love is teaching and seeing students blossom and grow. She wanted them to be the best nurse they could be. Her standards were high."

Ura set the bar high for a reason. "I call it like I see it," she says. "If a student wasn't doing well, I would tell them, 'you need to have empathy for patients and the desire to be a good nurse. Otherwise, you're not going to make it.'"

Those talks were the exception rather than the rule. For students who struggled financially, Ura would offer to assist with payments for their textbooks or a Sigma Theta Tau membership. "They really are like your children," Ura says. "You care about them. You love them. And you teach them the rules."

"It's fun to watch them graduate and follow their career trajectory," she adds. "I've taught thousands of students in my career. I wouldn't trade my nursing career for anything."—Pam Auchmutey

**Tribute gifts honoring Darla Ura may be made to the Emeritus Faculty Scholarship Fund. To learn more, contact Margot Early, associate director of development, at 404-727-5291 or [margot.early@emory.edu](mailto:margot.early@emory.edu).**

## Tough love: Teaching students to practice by the rules and from the heart

Last December, Tracey Wilds 88Ox 91N MSN ANP-C flew from Connecticut to see her longtime mentor, clinical associate professor Darla Ura MA RN ANP-C. By all accounts, Wilds traveled the farthest to attend Ura's retirement celebration at the School of Nursing.

Wilds was just nine years old when she decided to become a nurse. But she had more than education on her mind when she began her Emory nursing studies more than a decade later.

"I was interested in having a full college experience, including joining a sorority and other Emory campus activities with my Oxford College friends," says Wilds, currently a DNP student at Quinnipiac University. "Darla understood my 'youth' but also guided me firmly to mature and become a professional."

Ura similarly has touched the lives of thousands of students during her 28 years at Emory. When she joined the faculty in 1987, Ura staffed different units and taught students at what is now Emory University Hospital Midtown. It was a different time in nursing education, when students first practiced their clinical skills on real patients.

"The acuity of typical patients was not as great then," says Ura, who herself trained as a critical care nurse. "They were able to tolerate students learning on them. Patients now are much sicker, and students have to be ready to run when they first work on the floor. They have to have a place to practice."

Ura filled that need by pioneering simulation training at Emory. When the current School of Nursing building opened in 2001, she directed the new Center for Caring Skills, equipped with the latest patient simulators and hospital beds. When the center was

## Two lives, two legacies touch students and patients

### *A penchant for pathophysiology*



Barbara Reich

**Barbara Reich MN RN, the faculty member who introduced pathophysiology to the nursing curriculum in the 1960s and who was named an honorary alumna in 1999, died on December 10, 2015, in Atlanta after an extended illness. She was 84.**

After becoming engaged, Barbara and her husband Robert attended Yale University, where he earned a medical degree and she a master's in nursing. Totally hooked by physiology, she began a lifelong commitment to giving nurses a solid foundation in the physical and chemical processes of the human body.

When the Reichs moved to Atlanta in 1963, Barbara began teaching at Emory University School of Nursing. The school grew rapidly and expanded its BSN curriculum in which students not only took nursing courses, including Barbara's required pathophysiology course, but also anatomy, physiology, biochemistry, microbiology, and pharmacology, taught by medical school faculty.

After retiring in 1997, Barbara kept up with her nursing colleagues and former students, many of whom wrote to tell her how her teaching had influenced their nursing practice or teaching career. Susan Smith 70MN PhD FNP credits "one of the best faculty I had in four different universities" with inspiring her to get her doctorate and nurse practitioner certification. Now an NP at Presbyterian Healthcare Services in Albuquerque, Smith has made a planned gift in honor of Barbara to provide scholarship support for MSN students.

Retirement also gave Barbara more time for her many interests. Decorating a doll house with antique reproductions evolved into a successful miniatures business. During the last months of her life, Barbara spent time on site where the 2015 movie *Goosebumps* was filmed. The Reichs' beloved "Teddy" starred as a vampire poodle in the adaptation of the well-known children's book series. Although Barbara died before the film was released, it was one of the few regrets in her life, her family says.

In addition to her husband, Barbara is survived by sons Allen and Rob, Allen's wife Cheri, and grandchildren Kira and Maxx.—*Sylvia Wrobel*

### *Shaping midwifery practice*

**Many of the midwives practicing in Georgia today have Elizabeth Sharp to thank.** The national midwifery icon and Georgia public health leader passed away on February 7, 2016, in Alpharetta, Georgia.

Sharp DrPH FACNM FAAN, who was 82, brought nurse-midwifery practice and education to Atlanta and Emory, where she served on the nursing and medical faculties. Part of the credit goes to the late Mary Woody who, as nursing director at Grady Memorial Hospital, recruited Sharp from Yale School of Nursing in 1970 to establish a nurse-midwifery program at Grady. Sharp subsequently launched the graduate program in nurse-midwifery at Emory's School of Nursing in 1977. Today, it is the only accredited nurse-midwifery education program in the Southeast.

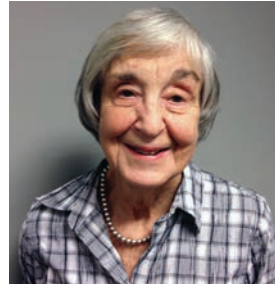
During Sharp's tenure at Emory, she brought the schools of nursing and public health together to develop one of the nation's first dual MSN/MPH degree programs. She also helped the School of Nursing establish significant community health initiatives to serve vulnerable populations in Atlanta. Today, community health and service learning remain part of the school's fabric.

Sharp advanced midwifery education and care in other ways through leadership positions with the American College of Nurse-Midwives (ACNM), the Georgia Board of Nursing, the Georgia Task Force on Midwifery, and the March of Dimes. She served as ACNM president from 1973 to 1975 and received the organization's Hattie Hemschemeyer Award in 1999 for meritorious service. She also received distinguished alumna awards from Yale and Emory.

Dean Linda McCauley regards Sharp as one of the most influential nurses in the nursing school's history. "She was a visionary leader and a change agent for midwifery education and practice," says McCauley. "Countless Emory nursing students and Grady patients have and will continue to be touched by the legacy Elizabeth has set forth."—*Melva Robertson*

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Elizabeth Sharp



Tribute gifts may be made to the Barbara H. Reich Scholarship Fund for graduate nursing students and the Elizabeth Sager Sharp Endowed Scholarship Fund for nurse-midwifery students. To learn more, contact Margot Early, associate director of development, at 404-727-5291 or [margot.early@emory.edu](mailto:margot.early@emory.edu).

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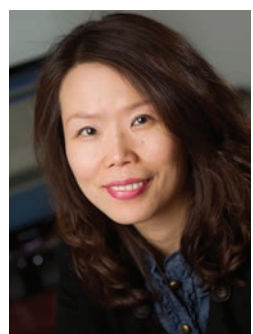
## Faculty Appointments



**Kylie Smith PhD** is the nursing school's first Andrew W. Mellon Faculty Fellow in Nursing and Humanities. Smith is an expert on psychiatric nursing history,

including approaches to post-traumatic stress disorders. Through her Mellon Fellowship, Smith is strengthening ties between the School of Nursing and the Emory College of Arts and Sciences and the liberal arts in the nursing curricula.

Before joining Emory, Smith lectured at the University of Wollongong School of Nursing in Australia, where she taught reflective practice and incorporated humanities research and teaching methods into the nursing curricula. In 2014, she researched the development of American psychiatric nursing after World War II as a fellow with the Barbara Bates Centre for the Study of the History of Nursing at the University of Pennsylvania.



**Mi-Kyung Song PhD RN FAAN** serves as acting professor and director of Emory's Center for Nursing Excellence in Palliative Care, providing expertise in improving end-of-life and palliative care for chronically ill patients and their caregivers. Since 2004, Song has conducted a series of studies on adults with serious illness, including those with advanced chronic kidney disease and cardiac disease, and lung transplant recipients with chronic rejection and their caregivers. These studies examined interventions to improve end-of-life communication and treatment decision-making

and palliative care design to address families' needs in a timely manner. Prior to joining Emory, Song was associate professor and the Beerstecher-Blackwell Term Scholar at the University of North Carolina-Chapel Hill.

## Notes of Distinction



### FELLOWS

Assistant professor **Melissa Pinto PhD RN FSAHM FAAN** was inducted as a fellow of the Society for Adolescent Health and Medicine. Pinto's

research has advanced the mental health field for nearly a decade. As part of this work, she developed eSMART-MH, an avatar-based mental health program that helps adolescents learn to confidently manage depressive symptoms. Pinto also received a Robert Wood Johnson Foundation 2015 Culture of Health: Breakthrough Leaders in Nursing Award. The award honors nurses who develop innovative approaches to improve health and health care.



**Lisa Muirhead DNP APRN-BC**, clinical assistant professor, and **Rasheeta Chandler PhD FNP-BC**, assistant professor, will be inducted as fellows of the American

Association of Nurse Practitioners in June.

Muirhead has devoted her nursing career to serving veterans and other vulnerable populations, including those who are homeless or who have serious mental illness. She is best known for leading Emory's Veterans Affairs Nursing Academic Partnership program, which trains undergraduate students in veteran-centered care in partnership with the Atlanta VA Medical Center.

Through her research, Chandler has pioneered sexual health interventions for African American women by incorporating social media and digital technologies into the health education process. African American women account for the largest share of new HIV infections at a rate 20 times



higher than for Caucasian women. Chandler recently was named one of the Top 40 Under 40 Leaders in Health Care by the National Minority Quality Forum.



### AWARDS

**Linda McCauley**, dean of the School of Nursing, is the recipient of the 2016 Charles R. Hatcher Jr. MD Award for Excellence in Public Health

from Rollins School of Public Health. The annual award honors faculty members of Emory's Woodruff Health Sciences Center for career contributions to public health. McCauley is the second nursing faculty member to receive the Hatcher award. The first was Annette Frauman PhD RN FAAN in 2001. The Hatcher award is named for the former vice president of health affairs who advocated for establishing Emory's school of public health in 1990.



**Canhua Xiao PhD RN** is the recipient of the 2016 Victoria Mock New Investigator Award from the Oncology Nursing Society. Xiao is a research

assistant professor whose studies focus on

cancer-related systems and the mechanisms of cancer-related fatigue. Her current studies include the role of pro- and anti-inflammatory signaling in fatigue in head and neck cancer, funded by the National Institute of Nursing Research, and fatigue and NF-kB-related inflammatory mediators in patients with head and neck cancer, funded by the Oncology Nursing Society Foundation.

### RESEARCH HONORS

The following faculty will be inducted into *Sigma Theta Tau International's Researchers Hall of Fame in Cape Town, South Africa*, in July.

**Dean Linda McCauley** has led interdisciplinary studies on the occupational and environmental health of working populations and their children for more than 25 years. Most recently, McCauley studied the health affects of environmental exposures and heat on pregnant women who work in the farming and fernery industries in Florida. Her research results have influenced health policy to reduce the risks of pesticide exposures among pregnant women and children. McCauley also serves as a dual principal investigator of the newly established Center for Children's Health, the Environment, the Microbiome, and Metabolomics, which looks at environmental factors affecting the health of African American mothers and infants in Atlanta.



**Deborah Watkins Bruner PhD RN FAAN**, Robert W. Woodruff Professor of Nursing, has worked with the National Cancer Institute's (NCI) Clinical Trials

Network (NCTN) for more than two decades. She is the first and only nurse to lead NCI-sponsored research groups on cooperative clinical trials, radiation therapy, and community clinical oncology.

As vice chair for outcomes of the Radiation Therapy Oncology Group, Bruner led a paradigm shift from a medically dominated focus on survival and toxicity to a patient-centered biobehavioral focus that includes nurse-sensitive symptoms management and quality of life outcomes. Additionally, she was the only female scientist to help guide the merger of three clinical trials cooperative groups into NRG Oncology, one of five lead protocol organizations in the NCTN. President Obama appointed her to the National Cancer Advisory Board in 2015.



**Elizabeth Corwin PhD RN FAAN** has shown that adverse pregnancy outcomes have predictable and preventable biological underpinnings and that exposure to racial

discrimination during pregnancy leaves a biological fingerprint of disadvantage on African American women. Her research was the first in nursing to show that dysregulation in postpartum psychoneuroimmune response increases the risk of postpartum fatigue and depression. Many regard her article on the subject, published in the *Journal of Women's Health*, as seminal in the field. Under her leadership as associate dean for nursing research, Emory is now ranked No. 4 among U.S. nursing schools for research funded by the National Institutes of Health.

### LEADERSHIP HONORS

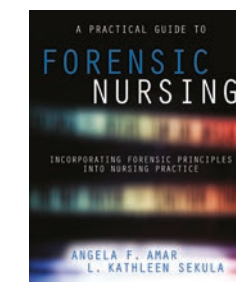
**Suzanne Staebler DNP FAANP**, coordinator of Emory's neonatal nurse practitioner program, was elected president of the National Certification Corporation (NCC). As president, Staebler will

lead efforts to promote quality health care for women, neonates, and their families through NCC, which provides a credentialing program for nurses, physicians, and other licensed health care professionals.

She also received two honors in 2015: the Georgia Nurse Practitioner Advocate of the Year Award from the American Association of Nurse Practitioners and the Neonatal Nurse Practitioner Excellence Award from the National Association of Neonatal Nurse Practitioners.

### NEW BOOKS

**Angela Amar PhD RN FAAN**, associate professor, is co-author of *A Practical Guide to Forensic Nursing: Incorporating*

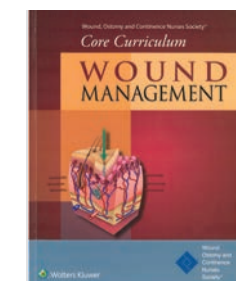


*Forensic Principles into Nursing Practice*. Co-written with L. Kathleen Sekula PhD, professor of nursing at Duquesne University, the book

offers practical and theoretical perspectives on violence and provides helpful resources, including jury assessment and violence prevention strategies. In addition, the authors provide a comprehensive overview of relevant legal, ethical, societal, and policy issues. Access their book at [bit.ly/nurse-forensics](http://bit.ly/nurse-forensics).

**Dorothy Doughty 72MN RN FAAN**

co-edited the textbook *WOCN Core Curriculum Wound Management*. Doughty



is former director of the Wound, Ostomy, and Continence Nursing Education Center (WOCNEC), a continuing education program at the School of Nursing. Contributors

include **Janet Ramundo MN RN**, WOCNEC instructor, and **Rose Murphree 11MN DNP**, current WOCNEC director and assistant professor. Access their book at [bit.ly/nurse-wounds](http://bit.ly/nurse-wounds).



Doreen Henricks 86N



Kirsten White 91MN



Albert Spurlock IV, born to  
Laura Mitchell- Spurlock 97N



Amy Kayler 01MN and daughter Samantha



Shannon Russell 06N  
and Lavelle Lindsay



Fayzah Abdulgadir Saeed 14N

## Another Golden Heart for Nursing

**Betty Marie Stewart 52N is something of a trailblazer. She was the first woman and first nursing alumna to lead what is now the Emory Alumni Board as president (1978 to 1979).** She has served the Nurses' Alumni Association (NAA) Board for more than three decades and Emory's Board of Visitors and the School of Nursing Council of Fifty. In addition, she helped found the Emory Alumni Association (EAA) President's Club, a university advisory body. Beyond Emory, she is a dedicated church and community volunteer.

For her contributions to the School of Nursing and Emory, Stewart received the NAA Award of Honor (1977) and the Emory Medal (1982), the university's highest alumni award. In 2002, Stewart donned a gold robe to march with graduates during commencement as a new member of Corpus Cordis Aureum (CCA), the Latin term for "the golden corps of the heart," an honor afforded to alumni who graduated 50-plus years ago from Emory. During commencement on May 8 this year, Stewart received the Judson C. Ward "Jake's" Golden Heart Award, presented by the EAA to honor longtime alumni for service, generosity of spirit, and loyalty to Emory.



Stewart is the second nursing alumna to receive this award. The first was **Barbara Reed 57N 79MN** in 2013. Also, Stewart is the eighth recipient of the Jake's Golden Heart Award, which honors the memory of Ward 33C 36G, who spent more than 80 years at Emory. When Ward died in 2009 at age 97, he held the title dean of alumni.

*Alumni who graduated 50-plus years ago are invited to attend the Corpus Cordis Aureum Medallion Ceremony, held annually during Emory Commencement Weekend. For more information, contact Kate Balconi, associate director of alumni and constituent relations, at 404-727-3348 or kate.balconi@emory.edu.*

### 1960s

**Gail Stroud 650X 68N** received the Georgia Hospital Heroes Award from the Georgia Hospital Association in January. She was one of 10 individuals honored statewide for providing exceptional care. Stroud has worked in health care for more than 50 years, starting in 1963 at Button Gwinnett Hospital, now Gwinnett Medical Center. She rode her bicycle to her job interview and was hired as a nursing assistant. After graduating from Emory, she returned to Gwinnett as the first BSN nurse in the system and continues to work at Gwinnett Medical Center.

### 1970s

**Kathryn (Kay) Grey Gatins 72MN** retired on Jan. 1, 2013, after serving on the nursing faculty for 31 years at Middle Georgia State University (formerly Macon State College) in Macon, Ga.

### 1980s

**J. Michael Pate 81MN** completed his assignment at the American Embassy in London. He is now director of medical providers with the U.S. Department of State in Washington, D.C.

**Doreen Henricks 86N** retired from Emory University Hospital on Dec. 31, 2015, after 32 years of service. She most recently worked in the cardiac cath lab.

### 1990s

**Janet (Jade) Kaplan 90MN/MPH** has joined the Maternal-Child Department of the Community Health Centers of Burlington in Vermont. For the past 13 years, Kaplan was an OB/GYN clinical instructor at Tufts University School of Medicine. She also taught in the OB/GYN residency program and the midwifery education program at Baystate Medical Center in

Massachusetts. For 10 years prior, Kaplan lived in western North Carolina, where she was the first nurse-midwife to practice at a rural regional medical center in the Appalachian Mountains. She pioneered the use of hydrotherapy in labor and birth and the state's first nurse-midwife-owned practice.

**Kirsten White 91MN** is a neonatal nurse practitioner at St. John Clinic in Tulsa, Okla.

**Kathy (Katie) Oldham 92MN** received the 2015 Nurse of the Year Award (general medicine category) from the Georgia Chapter of the March of Dimes. Oldham is the unit director for gynecology and general surgery at Emory University Hospital. Since 2011, her unit has sustained the highest nurse satisfaction scores among all other units in the hospital.

**BORN:** To **Laura Mitchell-Spurlock 950X 97N** and her husband, Albert, a son, Albert Spurlock IV, on May 28, 2015, at Emory Johns Creek Hospital. She works at Emory University Hospital Midtown.

### 2000s

**Amy Kayler 01MN** is a nurse-midwife with Northside Women's Specialists in Atlanta.

**MARRIED:** **Shannon Russell 06N** and Lavelle Lindsay on April 4, 2014. They live in Grand Rapids, Mich., where she is a family nurse practitioner.

### 2010s

**Jennifer Hogan 09C 11N** was promoted to Labor and Delivery RN Team Leader at Northside Hospital in Atlanta. She plans to attend midwifery school in the near future.

**MARRIED:** **Sarah Cavanaugh 13N** and Jonathan Snyder on Oct. 11, 2014. They live in Atlanta, where she works at Children's Healthcare of Atlanta at Egleston.

**Rachel Jung 14N** is a registered nurse in renal/urology at Emory Saint Joseph's Hospital in Atlanta.

**Fayzah Abdulgadir Saeed 14N** is a registered nurse at Piedmont Hospital in Atlanta.

**Bryonna Tucker 14N** is a pediatric nurse practitioner at Northside Hospital in Atlanta.



### This Nursing Life: CHRISTIE OH LO

**Christie Oh Lo 08MN has been in expansion mode since graduating from Emory.** Her daughter was born in 2009, followed by a son in 2012. Thus Lo embraced motherhood, and cooking and gardening, with a passion. Six years ago, she began working in hospice as a gerontological nurse practitioner. Two years ago, she went full time at VITAS Healthcare, a hospice and palliative care company, so that her husband, Michael, could establish Makan, a new restaurant in Decatur, Georgia. Open since July 2014, Makan serves Chinese and Korean dishes with a modern twist. Some of the dishes use fresh ingredients from Lo's sustainable garden. This past January, the Los opened Mama Tiger, a small restaurant in Emory's Dobbs University Center that serves steamed buns and dumplings, rice and ramen bowls, bubble tea, and cold side dishes.

Lo brims with enthusiasm about the restaurants, her family (including her mother, a former nurse), and her nursing practice, which includes visits to nursing homes, assisted living facilities, and patients' homes in 24 counties surrounding Atlanta.

"I love what I do," says Lo. "I enjoy establishing a rapport with patients, whether they're at home or in a facility. I'm able to manage their pain and anxiety and help them live their final days in comfort. I'm also there to support their caregivers so they know that what they do matters."

### Share Your News With Us

Please send your news and latest contact information to [alumni@nursing.emory.edu](mailto:alumni@nursing.emory.edu). Or visit [alumni.emory.edu/updateinfo](http://alumni.emory.edu/updateinfo).



The 2015 NAA award winners are (standing L-R) Mary Zellinger and Michelle Dynes, along with (seated L-R) Crystal Johnson, Jason Slabach, and Laura Mitchell-Spurlock.

## NAA honors five of its own

The Nurses' Alumni Association presented the following honors during Homecoming 2015. These annual awards recognize alumni and friends who advance the School of Nursing and the nursing profession.

### DISTINGUISHED NURSING ACHIEVEMENT AWARD

**Mary Zellinger 85MN** has been a leader in critical care and cardiovascular care at Emory University Hospital (EUH) for more than 30 years and an adjunct faculty member at the School of Nursing for more than 25 years. At EUH, Zellinger chaired the Resuscitation and Nursing Champions of Quality Committee to advance quality patient outcomes and worked closely with Cardiovascular Critical Care Unit staff to become EUH's first ICU to receive Beacon Status and Outstanding Critical Care Unit designation from the American Association of Critical Care Nurses (AACN).

She has held several leadership positions with AACN and served globally to advance cardiovascular and cardiothoracic critical care and share her knowledge through nursing leadership education in Tbilisi, Georgia. Previous honors include the March of Dimes Nurse of the Year Award for Advanced Practice and AACN's first National Mentor.

### EXCELLENCE IN NURSING AWARD

Three alumni were honored for the roles they played in caring for the four Ebola patients treated at EUH in 2014.

For nearly a decade, **Crystal Johnson 00N** has volunteered with the EUH Serious Communicable Diseases Unit (SCDU) for patients with highly contagious conditions. When the unit was activated to receive its first Ebola patients, Johnson helped treat them successfully despite the stigma and fear surrounding the disease. She raised awareness about Ebola and shared lessons learned by participating in media interviews, forums, and website development.

Like Johnson, **Laura Mitchell-Spurlock 95OX 97N** trains annually to care for patients in the SCDU. Spurlock serves as a nurse clinician in the cardiothoracic ICU at Emory University Hospital Midtown. She played an integral role in efforts to reduce the spread of the Ebola virus and used her prior training and "patient and family first" motto to excel in the intense training used to care for Ebola patients. She also partici-

pated in print and video interviews to help educate others about the Ebola virus.

**Jason Slabach 13N** joined the EUH cardiovascular ICU in 2013. His training at the School of Nursing and as a paramedic in Virginia prepared him for his role in the SCDU, where he handled patients' every need while following the stringent guidelines set by the unit. Slabach was interviewed on NBC and, along with Johnson and Spurlock, was part of the team named as *Time Magazine's* Person(s) of the year in 2014 and which received the Daisy Foundation's first Team Daisy Award.

### RECENT GRADUATE AWARD

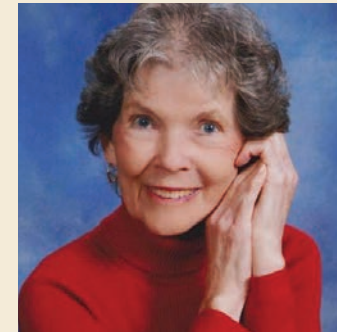
**Michelle Dynes 13PhD** is a senior nursing adviser in the Center for Global Health at the Centers for Disease Control and Prevention (CDC), where she is a former Epidemic Intelligence Service (EIS) officer. In 2014, she was deployed for six weeks to Kenema, the third largest city in Sierra Leone and one of the epicenters of the Ebola epidemic in West Africa.

While in Sierra Leone with EIS, Dynes and her colleagues taught local health professionals how to reduce the risk of contracting and spreading Ebola. She also created a counseling space in a government hospital to provide ongoing psychosocial support for health care workers and Ebola survivors. By conducting interviews and focus group sessions with new mothers and health workers, Dynes and her colleagues identified ways the hospital could continue to serve patients without Ebola—and spread the word that the hospital was safe for them.

For her efforts, Dynes received two awards for emergency response excellence from the CDC and the CDC/Agency for Toxic Substances and Disease Registry. She also was part of the team named one of *Time Magazine's* Person(s) of the Year in 2014.



Virginia A. Moody 46N



Mary Nan Carroll 51N



Yvonne W. Randall 51N



Patsy R. Partridge 58N

### 1940S

**Anna Hounshell Guy 42N** of Birmingham, Ala., on Aug. 1, 2015, at 97. In 1943, she married Rev. Henry A. Guy and served faithfully as a minister's wife in Florida in the 1940s and 1950s. She enjoyed her work as an RN and started out as a surgical nurse. After having children, she worked as a private duty nurse for many years. She is survived by two daughters, three sons, their spouses, 11 grandchildren, and 13 great-grandchildren.

**Oneida Starr Pike 45N** of Gray, Ga., on Aug. 31, 2015, at 91. She served in the U.S. Cadet Nurse Corps from 1943 to 1945 at Kennedy General Hospital in Memphis, Tenn. She met and married her first husband, George H. Heath, in 1946 and moved to Gray in 1951. They raised three sons. He died in 1972. She worked as a nurse in Gray for 22 years. She was a charter member of the Jones County (Georgia) Pilot Club for 25 years and a member of Gray United Methodist Church for 63 years. Predeceased by her second husband of 35 years, Alvin B. Pike Jr., she is survived by her three sons and their wives, two stepchildren, four grandchildren, and eight great-grandchildren.

**Virginia Ashe Moody 46N** of Snellville, Ga., on Jan. 29, 2015.

Born in Stone Mountain, Ga., she served in the U.S. Cadet Nurse Corps in WWII. In 1945, she married Paul S. Moody in the Glenn Chapel on Aug. 6, the day the atomic bomb was dropped in Japan. During her career, she served as a nurse at Kentucky Baptist Hospital (pediatrics), Georgia Baptist Hospital, and Georgia Regional Mental Health Hospital. Virginia served alongside her husband at pastorates in Indiana and Georgia. They also served as Southern Baptist missionaries from 1960 to 1973, when she resumed her nursing career. She worked for the DeKalb County Health Department until she retired in 1990. Virginia always stepped forward at auto accidents, saved a daughter's friend from a medical overdose, gave children shots that never hurt, and cared for her family. She also was the nutrition master. Virginia's daughter, Nancy Moody, writes, "At her funeral, we celebrated her nursing career with nurses standing by her casket and reading the Florence Nightingale Creed. Each nurse placed a white rose upon her casket. She was so proud of Emory and being a nurse." Survivors include five daughters, three sons-in-law, a grandson, and several nieces and nephews. Her husband Paul died in 2008.

**Margaret Scott Gardner 47N** of Blacksburg, Va., on Dec. 29, 2014,

at 89. She worked as a registered nurse for many years. Survivors include two sons, one daughter, their spouses, four grandchildren, and two great-grandchildren.

### 1950S

**Ellen Wilder (Jerry) Haymans 50N** of Madison, Ga., on Dec. 12, 2015, at 85. She lived in Savannah, Ga., for 52 years and moved to Madison in 2012 to live with a daughter. During her career as an RN, she worked in the neonatology units in Savannah hospitals. Survivors include three daughters, a brother, and four grandchildren.

**Mary Nan Carroll 51N** of Orlando, Fla., on Dec. 8, 2015, after a long illness. She married the Rev. Benjamin Reese Blackburn in 1948 while they were students at Emory. They had four children. They held ministries in various Methodist churches from 1953 until his death in 1967. She resumed her career as an RN and transitioned over the next 20 years to a career in nursing/adult education in the Central Florida School System. She retired in 1987 and continued to serve the United Methodist Church. In 1997, she married Lt. Col. Sterling P. Carroll and began her transformation into an "adventurous soul" for her twilight years. Survivors include her three daughters and son, three

grandchildren, two great-grandchildren, and six siblings.

**Ree Mills Howe 51N** of Decatur, Ga., on July 25, 2015, at home. A native of Alabama, she was raised in the south Georgia town of Blakely. She moved to Atlanta to attend nursing school at Emory and enjoyed a nursing career that culminated in being head nurse of Emory University Hospital. She married Karl Howe in 1957. They joined Clairmont Hills Baptist Church that year and remained devoted members. Survivors include her husband, a son and daughter, six grandchildren, and two great-grandchildren.

**Yvonne Worley Randall 51N** of Marietta, Ga., on Aug. 19, 2015, at 87. Upon graduating from Emory, she became a clinical instructor at the School of Nursing. She championed the reintroduction of lactation education and encouraged young mothers to breastfeed their babies. She and her husband, Dr. Henry Randall, raised five children. After their youngest started school, she began studying art and took up painting and then sculpture. During her 40-year career as an artist, she produced an outstanding portfolio of work, including oil paintings, sketches, and bronze sculptures. One life-sized bronze sculpture, "Stepping Stone," resides in the Cobb County Central Public Library in Marietta. Survivors include



**Ellen O. Fuller 60MN  
64MSc 68PhD**



**Helen S. Wilroy 69MN**



**Joan M. Harrison 86MN**



**Kimberley S. Lowe 92OX 94C 98N**

her husband of 64 years, two daughters, three sons, 19 grandchildren, and six great-grandchildren.

**Virginia Pease Gilmore 52N** of Mountain House, Calif., on Dec. 4, 2015. She was a head nurse in obstetrics until she married her husband Edward in 1959.

**Marilyn Mallard Spradley 52N** of Eastman, Ga., on Nov. 24, 2015, at 84. After Emory, she taught nursing at Georgia Baptist Hospital in Atlanta. She and her husband, James W. Spradley, raised five children. She was devoted to her family and her church, First Presbyterian of Eastman. She was accomplished in the art of needlework, mastering Japanese embroidery after decades of training. Survivors include her husband, two daughters, three sons, their spouses, a brother, and 11 grandchildren.

**Hazel Hutcheson 56N 58MN** of Atlanta on Jan. 30, 2016, at age 81. Retired as a clinical nurse specialist with Crawford Long Hospital, Hazel spent 23 years in the Emory Healthcare system and served on the nursing faculty at Emory, the Medical College of Georgia, and Crawford Long. She also consulted for the Georgia Department of Public Health and National Health Films. She was a communicant of the Episcopal Church of St. Philip and a docent at

the High Museum of Art. In 2005, she received an Award of Honor from the Nurses' Alumni Association at Emory. She is survived by her nephew, Andrew Rank.

**Jean K. Osborn 56N** of Lyons, N.Y., on July 25, 2015, at 81. She was a school nurse in Kinnelon High School in Kinnelon, N.J., for several years. She is survived by daughters Cynthia, Paige, and Leslie, 11 grandchildren, and one great-grandchild.

**Judith Reynolds Lord 58N 62MN** of Santa Rosa Beach, Fla., on Dec. 15, 2015. She was 79.

**Marion Baker McElroy 58N** of Port Saint Lucie, Fla., on Feb. 9, 2015. She was 80.

**Patsy R. Partridge 58N** of Clinton, N.C., on Sept. 26, 2015, at 79. She and her husband Kenneth shared 54 years together in marriage and ministry in Indiana and Maine. Back in the South, she was an active member of Mintz Baptist Church in Roseboro, N.C., and a faithful supporter of Mintz Christian Academy. In addition to her husband, she is survived by two sons, two daughters, their spouses, a sister and brother-in-law, six grandchildren, and two great-grandsons.

## 1960s

**Ellen O. Fuller 60MN 64MSc 68PhD** of Florence, S.C., on Nov. 16, 2015, at 92. She was an educator and research physiologist whose career spanned half a century. She lived most of the year in Searsport, Me., overlooking Penobscot Bay. She spent the winter months in Florence. While raising her children in Atlanta, she returned to school and received several degrees from Emory. Her teaching career included appointments as associate professor in applied health sciences at Georgia State University and assistant and later associate professor of physiology at Emory. In 1980, she was appointed director of the Center for Nursing Research and associate professor of physiology, a joint appointment to the University of Pennsylvania's School of Medicine. She is survived by four children and their spouses.

**Harriett Helton Gaudino 63MN** of Wytheville, Va., on Aug. 7, 2015, at 80. She dedicated her life to a career in nursing, both as a practitioner and administrator. She initiated the associate degree nursing program at Bluefield State College in Bluefield, W.Va., in 1967. She retired from Wytheville Community College as an administrator/teacher in the nursing program in 1993. She also taught at West Virginia University School of

Nursing and mentored many students over the years. An avid traveler, she visited 60 countries and 48 states. Preceded in death by her husband Dominic, she is survived by a brother and sister-in-law, a nephew, two nieces, and a grandniece.

**Monda Susan Wade 64N** of Toledo, Ohio, on July 28, 2015, at 75. She proudly served her country in the U.S. Army as a nurse, earning several medals for service in the Vietnam War. She was in the Army Reserve for more than 28 years, retiring as a colonel. Survivors include two cousins and five nephews.

**Elizabeth G. Benjamin 67MN** of Hattiesburg, Miss., on Dec. 24, 2014, at 84. She was buried in Tallulah, La. She was a retired nurse who taught at the College of Nursing at the University of Southern Mississippi.

**Lynda "Bebe" Robbins McQuaig 68N** of Waycross, Ga., on Dec. 26, 2015, after a long illness. She was 70. She spent most of her adult life in Waycross and worked as a nurse at Clinch Memorial Hospital. She also taught nursing at South Georgia College and at Satilla Regional Medical Center in Waycross. She rose through the ranks at Satilla (formerly Memorial Hospital) from house supervisor to nurse manager for critical care. In 2000, she retired

from nursing and became known as "Gigi" when her first grandchild was born. Survivors include her husband of 50 years, Richard, two sons and a daughter, their spouses, six grandchildren, her sister Jan, and several nieces and nephews.

**Helen Sanderfer Wilroy 69MN** of Hattiesburg, Miss., on Nov. 10, 2015, at 95. She served as a public health nurse from 1941 to 1943 and as an ensign with the U.S. Naval Reserve from 1941 to 1942. During this time, she met her future husband, Thomas Lake Wilroy. They married and went to live on his family's farm in Arkabutla, Miss. She left nursing to raise their two children and help on the farm. In 1954, she returned to public health nursing and later became a staff nurse at University Medical Center in Jackson, Miss. She started nursing school at the University of Mississippi and earned her BSN in 1965, before earning her MN at Emory in 1969. Focusing on mental health, she worked at Ellisville State School in Ellisville, Miss., for five years and then transferred to Hudspeth Retardation Center in Whitfield, Miss., where she served as director from 1976 until her retirement in 1979. Governor Cliff Finch recognized her service to the citizens of Mississippi with a certificate. During retirement, she traveled and started painting. She stopped driving at 93 but stayed active with the help of friends and caregivers until her health began to fail. Survivors include her daughter, Mary Charles, son-in-law Cecil, and grandsons Alex and Andrew.

## 1970s

**Mary (Molly) Stuart McAskill Wiggins 71N** of Covington, La., on June 29, 2015. She was 78. After Emory, she earned a master's of education from the University of

New Orleans. She worked as an RN, a nursing educator, and a public notary. She was a member of the North Shore Chapter of the American Harp Society and served as president from 2010 to 2013. Survivors include two sons, a daughter, their spouses, eight grandchildren, and two great-grandchildren.

**Cindy A. Burbach 76MN** of Wichita, Kan., on April 29, 2015, at age 64. She was a retired nursing professor for Wichita State University and nursing coordinator for the Wichita Public Schools. She also served as director of epidemiology and communicable diseases for Sedgwick County. Survivors include her husband of 44 years, Daryl, son Collyer, granddaughters Ava and Ella, mother Emily Laue, and brother Doug Laue.

**Deborah (Debbie) Bledsoe Schuyler 79N** of Charlottesville, Va., on Aug. 5, 2015, at 57 from a glioblastoma. After Emory, she obtained her anesthesia certification at George Washington University. She moved to Charlottesville in the early 1980s. She loved animals, listening to music, and hanging out with friends and family. Survivors include her husband Sam, daughter Phoebe, three sisters, her mother and father, and her favorite puppies.

## 1980s

**Joan Moore Harrison 86MN** of Decatur, Ga., on July 27, 2015. She received her BSN from Florida State University and worked as an RN at several hospitals. After raising three children, she went back to school at Emory to earn her MN and become a nurse practitioner, specializing in gerontology and mental health. She spent her later career in Emory's neurology department where she served families and patients with Alzheimer's disease, Huntington's disease, and other brain disorders. She was diagnosed in 2010 with corticobasal ganglionic degeneration, a movement disorder similar to Parkinson's. It gradually took away the things she loved to do—walk, sing, garden, play the piano, and volunteer at church—but she enjoyed the company of friends and family to the end. Survivors include her husband William, two sons, a daughter, and four grandchildren.

## 1990s

**Linda Ann Blum 90MN** of Fruitland Park, Fla., on Oct. 23, 2014, at 70.

**Lisa A. Poppell 90N** of Tucker, Ga., on Dec. 22, 2015.

**Mary Margaret Mendler Hall 96N**

of Lawrenceville, Ga., on Sept. 14, 2015. She moved to Georgia from Pennsylvania in 1991. After Emory, she worked in nursing until her retirement in 2011. Survivors include her husband of 40 years, William (Bill), their sons Christopher and Brian, grandson Logan, two brothers, and two sisters.

**Kimberley Smith Lowe 92OX 94C 98N** of Suwanee, Ga., on Oct. 16, 2015. She was 43. Born in Atlanta, she was a nurse practitioner with North Chattahoochee Family Physicians. She was an actress in several community theaters around Atlanta. She is survived by her husband Clinton, son Harrison, brother Mark, and her parents, Martha and Curtis Smith.

## Staff

**Ruth Russell** of Decatur, Ga., on Feb. 1, 2016, at 90. A native of North Carolina, Ruth attended Rogers Business School in her hometown of Sanford. She met her husband Gene at a USO dance, and they married in 1944. She began her career as a secretary at WIFM in Elkin, N.C., and subsequently served 30 years as a staff member with the School of Nursing, which made her an honorary alumna. She is survived by sons John Michael and Steven, four grandchildren, and four great-grandchildren.

## Honor Your Classmates

Tribute gifts are an extraordinary way to honor your classmates. You can designate a gift for any occasion—a birthday, anniversary, special achievement, or the passing of a loved one, colleague, or friend. To make a gift, please contact the Office of Development and Alumni Relations at 404-727-6917.





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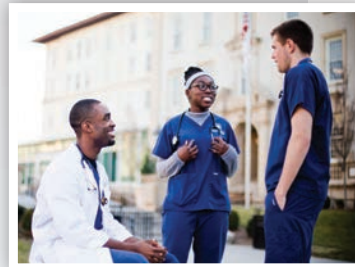
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# This is my legacy.



“MY NURSING CAREER was just wonderful—I loved every bit of it. For 45 years, I worked as a public health and mental health nurse, and for 15 of those years I also taught at Emory. I’ve always wanted to help people, and I was able to do so in the most rewarding ways. That’s why I’ve made a bequest to support nursing scholarships. I want to continue helping others, and scholarships provide needed support to talented students.”

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*Betty Daniels 51N 67MN*  
Retired Nurse  
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