SPRING/SUMMER 2017

DREXEL UNIVERSITY

# College of Medicine

# SHINING New Light on Overeating

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Adopt-a-Doc

"Adopt-a-Doc" is a unique opportunity to support one student throughout four years of medical school.



#### The concept is simple:

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SPRING/SUMMER 2017 Vol. 4, No. 1

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**ON THE COVER:** Neuroscientist Nick DiPatrizio looks beyond the brain to see how the gut drives eating behavior.

Photo: Carrie Rosema



### FEATURED

PAYING IT FORWARD BY GIVING BACK

Alumni John Piper, MD, and Deborah Tuttle, MD, have committed their lives to patient care and educating future physicians. Their gifts help make medical school more accessible to more students while strengthening and enriching the experience.

## **ARTICLES**

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GUT INSTINCTS IN OBESITY RESEARCH: THE PROMISING WORK OF NICHOLAS V. DIPATRIZIO, PHD '086
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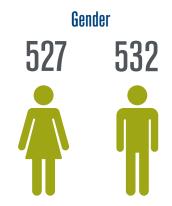
## DEPARTMENTS

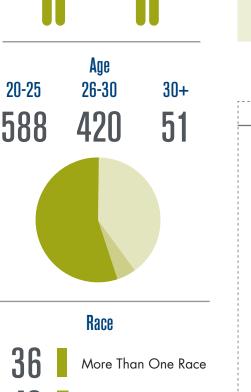
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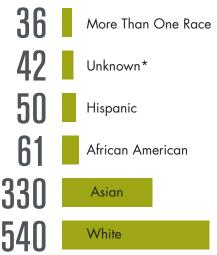


Drexel University, founded in 1891, celebrates 125 years during the academic year 2016/17.

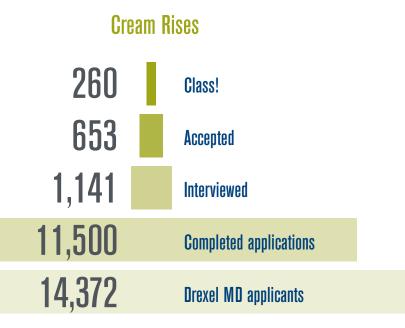
# Total MD student enrollment 1,059







\*We do not provide information on groups of five or fewer because of privacy concerns. For this reason, Native American and Pacific Islander categories have been combined with Unknown.



Building the Class of 2020

#### LETTERS

Alumnus Jerry Frankel, MD, sent a piece from The New York Times, "The Conversation Placebo" (https://nyti.ms/2jBF9V9), with his letter below. In the column, an internist talks about pain and how simple conversation between doctor and patient can be a potent analgesic.

I am a member of the Hahnemann class of 1969, now retired. I had a wonderful career as a urologist but I never forgot the art of medicine as taught by Dr. Wilbur Oaks: Listen to the patient. Although I didn't suggest placebos, countless patients asked me to be their primary care doc because I listened. Too many docs don't have the time to listen because of constraints they have no control over. Docs must be proactive if they want to enjoy their profession. There must be sufficient time spent with patients to develop a doc/patient relation that works for the patient and is the reason many docs chose this unbelievable profession. *Jerry Frankel, MD, Plano, Texas* 

An item in The Philadelphia Inquirer referred to the first pediatric kidney transplant at St. Christopher's Hospital for Children, in 1972. "According to an online hospital history," the paper said, it was the first pediatric kidney transplant in the Philadelphia area. Alumna Mary Coté, MD, WMC '59, wrote to set the record straight.

There were many incorrect citations, including the names of the doctors. The first pediatric kidney transplant performed in Philadelphia *was* done at St. Christopher's. The principals of the team were Lawrence Summers, MD, surgeon; Harold Lischner, MD, immunologist; and Mary Coté, MD, nephrologist. The date: January 14, 1971.

Mary Coté, MD, Philadelphia

WE WELCOME Your letters Correspondence may be mailed to Editor, Drexel University College of Medicine Alumni Magazine, 1505 Race Street, MS 484, Philadelphia, PA 19102, or emailed to jtracy@drexelmed.edu. Please include your contact information. The magazine staff reserves the right to edit for space and style.

# Milestones

#### Dear Alumni,

This year Drexel University is celebrating its 125th anniversary, made possible by the extraordinary vision and philanthropy of its founder, Anthony J. Drexel.

A true game-changer within that milestone includes the acauisition of this medical school.

Our legacy schools — Hahnemann Medical College and Woman's Medical College of Pennsylvania — which predate the University's founding, were created in perfect alignment with Anthony Drexel's vision of education for all — a broad, inclusive philosophy for men and women of all racial, ethnic and religious backgrounds.

And in the 15 years since we became Drexel University College of Medicine, philanthropy continues to have a significant impact on our ability not just to live our mission but to expand and enrich it.

Over the course of this decade and a half, more than \$150 million dollars has been given to further our mission, and more than half of that has come from generous individuals like you who have chosen our school as a priority for their giving!

These funds helped us build a world-renowned Legacy Center and Archives; created a new, integrated, state-of-theart curriculum; modernized laboratories; enhanced simulation and other teaching and learning technologies; endowed chairs; and provided life-changing scholarship opportunities for our students.

Caring alumni also contributed their time and expertise to student career panels and research events, served as mentors and offered shadowing opportunities, as well as volunteering for the alumni board and reunion committees.

There are many illustrations of how the College of Medicine's impact grows when it is fueled by the collective efforts of our students and faculty, combined with the energy and compassion of our alumni and friends, and the support of donors. We are a better school because of your generosity, and we are immensely grateful you have chosen to make the school a priority. We could not do this without you!

Cordially,

Ellidlow MD

Daniel V. Schidlow, MD Walter H. and Leonore Annenberg Dean Senior Vice President of Medical Affairs

Note: Please visit the College family tree, or timeline, on pages 18–19.



# WHERE ARE THEY NOW?

For some graduates, an advanced degree is one in a series of achievements on a predetermined course. For others, it's the launching pad for a surprising trajectory. Here four alumni tell us where they are and how they got there.

## **PLAYING "HOUSE"**

NIKHIL MULL, MD '08, assistant professor of clinical medicine and co-director, Center for Evidence-Based Practice, University of Pennsylvania

Many people think of general internists as doctors who push a lot of paper around, but I think what I've learned is that general internists are like the coach of the football team. They're calling the plays. It's up to the specialist to decide whether to run the play you called, but you are ultimately responsible for a lot of the decision-making.

I chose Brown for my internship and residency primarily because it was a very general internal medicine program, without a heavy focus on subspecialty rotations. At Brown, all the program directors are primary care doctors themselves or hospitalists, which very much fostered a breed of general internists who are excellent clinicians.

The nice thing is you get to do a little bit of everything along the way, and they give you time to explore your interests. After residency, I worked in one of their community health systems for a year as an attending hospitalist. I

wasn't sure what I wanted to do. I was interested in four different

specialties: intensivist, hematologist, oncologist or nephrologist.

In the end, I realized what I really wanted to do was general internal medicine, but in a way that included all those special interests. I joined Penn as a faculty member in clinical medicine. I'm also co-director of the Center for Evidence-Based Practice. We compare different treatments, protocols, processes, drugs and devices to help our health system make purchasing, policy and formulary decisions. Part of the center focuses on working with health care agencies to do this on a national level.

As a provider, I'm exclusively a hospitalist. That role includes a lot of the things I liked about other specialties. I particularly like the diagnostic element of my job. We are a pretty big referral center, so we have lots of patients coming in from other hospitals. We do

a lot of diagnostic-dilemma work, and that can be fun, sort of like being a detective while being a clinician. We spend a lot of time with medical students and house staff. I tell people that my job is like the TV show "House," but I'm not as rude as Dr. House was.

While I was at Drexel, Dr. Miller and Dr. Boselli had a big impact on me. When I look back, I think, wow, how will I ever have as much knowledge about patient care as my mentors had? But now I'm in that role myself. I tell the students, this is what you have to do, here is how to stay on top of everything, and your patients will be very thankful for all that you put into their care.

#### ADVANCING ANIMAL CARE IN CANCER RESEARCH

**GILLIAN BRADEN, MLAS '08**, animal program veterinarian, National Cancer Institute, National Institutes of Health

I came to the Master of Laboratory Animal Science program as a pre-veterinary course, with the aim that I would eventually be doing laboratory animal medicine.

I got much more out of the program than I expected. Some of the coursework that we did in our first year — physiology and pharmacology, genetics, microbiology — all those classes were extremely valuable not only in vet school but even now at this stage of my career. Some of the laboratory animal science-based courses had information that I use to this day, including some of the basic biology of different species.

I graduated from Penn Veterinary School in 2012 and started a three-year residency program at the Tri-Institutional Training Program in Laboratory Animal Medicine and Science, which is a joint program of Memorial Sloan Kettering Cancer Center, Rockefeller University and Weill Cornell Medical College. I specialized in comparative medicine.

I joined the National Cancer Institute shortly after that. We have a

large institution for animal work, and I'm involved with the clinical care of those animals, monitoring compliance, and post-approval monitoring of animal study proposals. I consult with principal investigators and help them design experimental studies. I conduct training for staff members on anything from basic animal handling to surgical skills. I also teach American Association for Laboratory Animal Science certification classes for staff, review guidelines and SOPs for the institution, and support any research on animals from the NCI and occasionally other NIH institutions.

I mainly focus on basic discovery and preclinical research. Some of our PIs are physicians who do clinical work for NIH and do animal studies as well. I help them design experimental protocols, ensuring that that they are using the best animal model for the type of cancer they're studying and that they have the correct humane endpoints for that model.



I've always been a big advocate for transparency in the use of animals in biomedical research, and I dedicate my life to making sure that the animals are treated humanely. Not everyone involved in the care of laboratory animals is a veterinarian, but there are animal caretakers, research technicians, veterinary technicians, quality-assurance people, trainers — so many people who are dedicated to caring for research animals as humanely as possible. Most people are unaware of all the care that goes into this field.



## **FINISHING 29TH GRADE**

# PAUL PHELPS, MD '10, ophthalmologist and ophthalmic plastic and reconstructive surgery fellow

When I was in medical school, I spent a year on a Fulbright at Aravind Eye Hospital in Madurai, India. I had heard of oculoplastics, but that was my first experience with it.

After my internship, I did a three-year ophthalmology residency at Cook County Hospital in Chicago, a very clinically oriented program. I did around 300 cataract surgeries, which is a lot for a residency program. From there, I went to the opposite end of the spectrum, to a very academic eye pathology fellowship with Dr. Daniel Albert, who's one of the gurus of eye pathology and ophthalmology in general.

Now I'm at the Albany Medical Center Eye Clinic doing a two-year oculoplastics fellowship. The technical term is ophthalmic plastic and reconstructive surgery. I'm a board-certified ophthalmologist, but there's a second set of exams, and a thesis, for membership in the American Society of Ophthalmic Plastic and Reconstructive Surgeons. So I'm not quite finished my medical education.

The three main things that we talk about within oculoplastics are orbit, lacrimal and lids. The procedures range from bone surgery of the eye socket (if a patient has a lacrimal gland tumor that needs to be removed, for example) to repairing the tear drainage system to eyelid reconstruction.

People in oculoplastics can do any facial cosmetic surgery as well. I offer Botox for people whose eyelid muscles spasm uncontrollably or who have hemifacial spasm. We also do cosmetic Botox and fillers, blepharoplasties and sometimes even full facelifts.

Plastic surgeons will refer their patients to us, as will ophthalmologists and dermatologists, because they don't want to go near an eye with skin cancer. We do quite a few skin cancer reconstructions. Sometimes the patient's whole eyelid is involved; that requires a lot of creativity, because every case is different. My day can be a lot of different things. I see neonates and 100-year-old patients.



I also enjoy the research aspect of the work. I have about 23 publications to my credit now, and when I finish my thesis and exams, I'll work as an assistant professor or an associate professor at NorthShore University HealthSystem, where I will be teaching University of Chicago residents.

I like helping residents who are interested in ophthalmology, and in oculoplastics specifically. It's not an easy field to get into, so I like to be a mentor to residents. It's really enjoyable when you have somebody who's motivated and asks good questions. It makes me think critically and helps me to improve my own practice.

When anyone asks what I do, I tell them I'm in 29th grade, but I'm looking forward to finally joining the ranks of the employed.

#### DRIVING RESEARCH FOR PARKINSON'S DISEASE

KULDIP DAVE, PHD '05, director of research programs, Michael J. Fox Foundation

With my PhD in pharmacology and physiology, I completed a three-year postdoctoral fellowship studying opioid receptors and developing in vivo and in vitro models of pain at Adolor, a small biotech. I went on to work for Wyeth Research, where my primary function was to drive the drug discovery program in women's health for mood disorders, which suited my background in neuropharmacology.

After Wyeth was acquired, I wasn't sure what I wanted to do next. I was curious what a scientist with my qualifications and expertise does in a nonprofit foundation. I had an informational call with someone at the Michael J. Fox Foundation, who told me about his job and what kind of impact he was having on research. It seemed very enticing. He hired me three months later.

My education has allowed me to fit myself into different therapeutic areas. Now, my single focus is on Parkinson's disease, but the challenges for drug discovery in Parkinson's are common to other neurological disorders — a lack of biomarkers and the need for long clinical trials because of the heterogeneity of the disease.

As director of research programs, I oversee about \$25 million of our portfolio, which includes two of our largest priority areas, alphasynuclein and GBA [glucocerebrosidase]. "Priority areas" means that instead of waiting for the research community to come to us, we lay out the strategy and develop groups that are working on a particular challenge.

About 50 percent of my job is scientific research management. I identify gaps in research, identify challenges in drug development, and build a strategic roadmap by which we can fill those gaps. Once we fund a program, I essentially become a scientific manager for that grant.

Right now, I manage about 85 grant projects. I write the milestones, have calls with the investigators and determine if the milestones are met. Having milestone-based payments allows us to troubleshoot the project and work with the awardee if it needs to be modified or if we need to take another path.

I've been managing alpha-synuclein for six years now. When I started, there was not a single therapeutic in the clinic. They were all in the early preclinical stages in drug discovery. These programs needed the foundation's support, so we formulated request-for-application calls. We funded about 40 different programs, and I'm happy to say that three of those programs have now entered the clinic.

Another part of my job is developing and maintaining relationships with government agencies and other nonprofits. I also work with contract research labs to develop our portfolio of research tools. That way, we control the quality of a tool and its distribution. We can make these resources available to everybody, so it's not cost prohibitive to conduct this important research.

As a student, you never quite know where your path is going to take you. I went from graduate school to a small biotech to a large pharma to a nonprofit, none of which I could have predicted. There are many ways to get to the top of the mountain, and you find your own way to do it.



DiPatrizio's lab hones in on the endocannabinoic system and its lipid signaling molecules a potential path to understanding obesity.

GUT INSTINCTS

10

DREXEL UNIVERSITY College of Medicine ALUMNI MAGAZINE

# OBESITY RESEARCH By Elisa Ludwig

The obesity epidemic is a notoriously complex problem that has confounded researchers for decades, but Nicholas V. DiPatrizio, PhD '08, has uncovered a promising new connection. His findings suggest that the body's lipid messengers in the gut, known as the endocannabinoids, signal the brain to seek out fat-rich foods — and that too much of this signaling results in the addiction-like behavior of compulsive overeating.



Dr. DiPatrizio

More than two-thirds of adults in the United States are overweight or obese, and associated diseases and conditions cost the health care system between \$147 billion and \$210 billion per year. "We know this is a significant problem, but we also know it's not about one system of the body," says DiPatrizio, assistant professor of biomedical sciences at the University of California Riverside School of Medicine.

Research has shown that humans and other mammals adaptively gravitated toward fat-rich foods for survival in the wild. Yet in our contemporary world with its industrialized food system, high-caloric foods require little energy expenditure to obtain. The continued instinctive drive to eat them is a major factor in the obesity epidemic.

DiPatrizio's work focuses on the endocannabinoids, a group of lipid signaling molecules in the body that moderate numerous physiological processes. The endocannabinoids are naturally released chemicals that activate cannabinoid receptors throughout the body, which, as their name suggests, are also activated by marijuana. It is at the site of this system that a link between overeating and drug abuse may be made. "As neuroscientists, we tend to be very brain-centric but there is a body attached to the brain, and I wanted to understand how it regulates feedin and sensory signaling."

Naturally released chemicals that activate cannabinoid receptors throughout the body stimulate the brain, whether they originate with drug use or overeating.

#### UNDERSTANDING FOOD AS A DRUG

"The brain regions that are activated by overeating are those similar to the regions activated by drugs of abuse," DiPatrizio says. "So it's likely that the drugs actually highjack a natural reward system in the body that was a survival mechanism for eating."

DiPatrizio first became interested in the endocannabinoid system as a psychology major at Temple University, when he worked in a pharmacology lab to study the body's interactions with cannabis. Later, as a graduate student at Drexel College of Medicine, he approached Kenny Simansky, PhD, now vice dean for research, who was conducting studies about serotonin, opioids and food reward. Seeing a logical connection, DiPatrizio pitched him the idea of looking at endocannabinoids in the brainstem and their impact on eating patterns.

"As we train doctoral students we believe it's important to let them drive the research. When he came to me with this idea that perfectly fit into the overall purpose of my lab, I just thought it was terrific," Simansky says.

DiPatrizio regards that opportunity as the true beginning of his career. "I credit Dr. Simansky with really challenging me to think critically and rigorously. Without him, I would not have my own laboratory today."

During their collaboration, they observed rodents' eating patterns, and discovered that the endocannabinoid system in the brainstem in fact regulates neurotransmission from the oral cavity. That finding, and coursework in pharmacology and molecular biology at the College of Medicine, helped DiPatrizio think across disciplines, creating an important foundation for his future study.

#### FOLLOWING THE SIGNALS

After he completed his PhD in neuroscience at Drexel, DiPatrizio furthered his research at the University of California Irvine School of Medicine, broadening the focus to encompass an even more integrative approach. "At that point I became interested in looking at how the endocannabinoid system integrates with the brain information from other organs in the periphery. As neuroscientists, we tend to be very brain-centric but there is a body attached to the brain, and I wanted to understand how it regulates feeding and sensory signaling."

During his six-year postdoctoral fellowship, DiPatrizio began to use tandem mass spectrometry to analyze endocannabinoid levels and capture signaling events. He won NIH funding for his work, and one of his findings — that when an individual tastes dietary fats, the endocannabinoids produce signaling in an area of the small intestine — received wide media coverage, including a story in *The New York Times* in 2011.

#### DIETARY DANGERS

In his UC Riverside School of Medicine laboratory, DiPatrizio continues to examine the integrative neurobiology and physiology involved in food reward, sensory processing and energy balance. Twelve students in his laboratory deploy a range of approaches, including surgical, biochemical, molecular, pharmacological and behavioral tools, in addition to cutting-edge analysis with mass spectrometry and ultra-performance liquid chromatography.

As he has observed the behavioral differences of rodents

eating Western (high-fat, high-sugar) food versus those on a low-fat, low-sugar diet, new questions have emerged. "As soon as you switch them to the Western diet, the rats quickly gain body weight. We look at the meal patterns and the total consumption — they end up consuming twice the number of calories as the animals eating the lean diet. It's binging behavior, much like that seen in drug addiction. We wanted to know what causes this biochemical event and encourages this way of eating."

DiPatrizio's team used mass spectrometry to look at the endocannabinoid levels in the rodents' small intestines and in their bloodstream, and found that, indeed, the levels in those rodents eating the Western diet had more than doubled.

"Our next question was whether those endocannabinoid levels were actually driving the binge-eating behaviors. Through pharmacological means, we were able to use antagonist molecules to block the cannabinoid receptors and inhibit that signaling. Sure enough, once we blocked them, we were able to normalize all feeding behaviors — meal sizes returned to normal and so did the rate of intake. Our conclusion was that the Western diet did, in fact, increase meal size associated with elevated levels of endocannabinoids." The results were shared in "Peripheral Endocannabinoid Signaling Controls Hyperphagia in Western Diet-induced Obesity," published this year in *Physiology & Behavior* (PMID: 28065722).

DiPatrizio now wants to analyze the diet and find out which kinds of fats, which kinds of sugars, and which combinations thereof drive the excessive signaling. "What we do know so far is that both fat and sugar are important in causing obesity," he says.

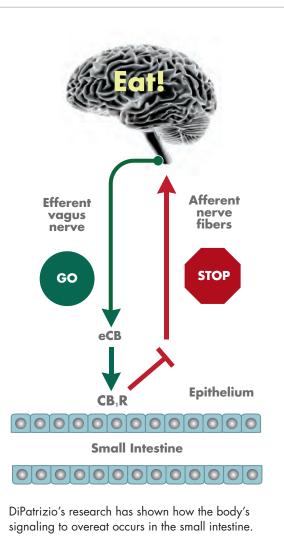
#### A PATH TO TREATMENT

Gaining a better understanding of the neural and molecular mechanisms underlying food preferences and compulsive eating behaviors may be essential for a broader view of the many systems in the body involved in obesity. The goal, of course, would be to apply these discoveries to the development of novel therapeutics and expand treatment options for people struggling with weight issues and resulting metabolic syndrome. An antagonist like the one DiPatrizio's lab tested, for example, might be used by humans to turn off the signaling and reduce binge eating.

A similar tactic has been tried before, but the product never made it to the American market. "About 10 years ago there was a molecule that inhibited the endocannabinoid system,

> The goal, of course, would be to apply these discoveries to the development of novel therapeutics.

"If you can remotely control the urge to overeat food from the periphery, then you can reduce the probability of obesity It's very exciting."



and it worked very well for reducing waist circumference," DiPatrizio says. "But it was also tied to a higher incidence of depression and other psychiatric issues, so the FDA did not approve it."

DiPatrizio's focus on the peripheral nervous system may pave the way for a more successful product. "The work we've done has now identified the area in the gut that can be targeted by an inhibitor which doesn't go through the blood-brain barrier. With the right molecule you would have the same pro-metabolic effects but without the psychiatric side effects. If you can remotely control the urge to overeat food from the periphery, then you can reduce the probability of obesity. It's very exciting."

While there's much more to be learned, DiPatrizio's novel revelations about the brain-gut dialogue mark an important contribution to the body of research. "What is profound is the way this work looks beyond the brain and how what happens in our intestines can be driving our behavior," Simansky says. "He's the only one who has put this together — he took what he did in our laboratory and combined it with other findings to create a new paradigm. It's what we hope for, that a scientist comes to us with a passion and leaves with a career of discovery."

# **DR. ANNIE** Still Making Her Mark

At a time when most women could not vote or get a bank loan, Annie Lowrie Alexander, MD, an alumna of the Woman's Medical College of Pennsylvania, was a charter member — and became president — of the Mecklenburg County Medical Society. The first licensed female physician in North Carolina, Alexander opened her practice in Charlotte in 1887 and served the community for more than 40 years.

Alexander's trailblazing pursuits and public service were honored in December 2016 with the installation of a North Carolina Highway Historical Marker at 400 N. Tryon St., Charlotte, the site of her home and office.

Although her caseload was largely gynecology, obstetrics and early childhood diseases, Alexander treated a wide variety of illnesses. As president of the county medical society, she spearheaded a campaign against hookworm, which was prevalent in the South. During World War I, Charlotte was home to Camp Greene, a large training facility, and Alexander was designated a temporary first lieutenant and acting assistant surgeon in the U.S. Army Medical Corps.

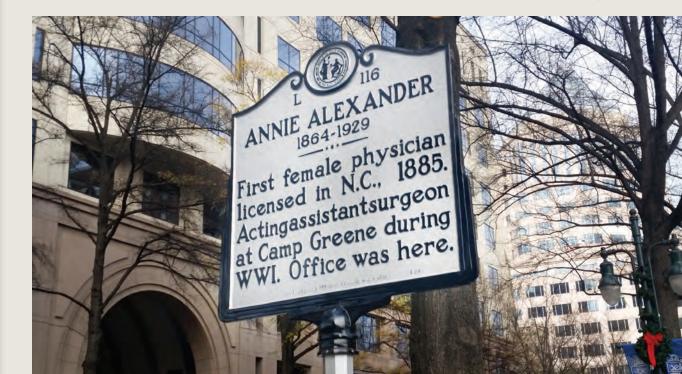
Alexander was physician to the Charlotte YMCA, students at Presbyterian College for Women and the Florence Crittenton Home for Unwed Mothers. She served on the boards of many organizations, including two hospitals. She also wrote and presented a number of research papers.

Alexander never married but raised a boy born to an unwed mother at the Crittenton Home, and after the death of her brother in 1901, she raised his seven children as well.



"Dr. Annie," as she was known, was initially educated by her physician father. She graduated from Woman's Med in 1884.

Still a role model, Alexander was nominated for the highway marker by a high school student who had studied the doctor's life for a prizewinning project in the annual North Carolina History Day competition.





Deborah Tuttle receives a crystal apple from Dean Schidlow to honor her commitment to excellence in medical education, after the installation of Valerie Weber (center) as the inaugural Tuttle-Piper Vice Dean for Educational Affairs.

There's no overestimating the impact of a skilled educator on an eager medical student. As academic clinicians, Deborah Tuttle, MD, MCP '82, and her husband, John Piper, MD, MCP '83, have seen firsthand how medical education and access to learning opportunities can determine the course of both physicians' and patients' lives.

"Looking back over our many years of practice, we know that our medical education is our most valuable possession. It is a privilege every day to practice medicine — it helps to define us, ground us, humble us and enrich us. It has not been a job, it has been a lifetime of learning, growth and service," says Tuttle.

"Our education at MCP prepared us well for the challenges of medicine. As students we focused on didactic and clinical work — the tasks of becoming a doctor. However, we learned many things we were not aware of — excellence, compassion, resilience, passion, teamwork, commitment and intellectual curiosity — that have made all the difference in our success. We attribute this to the strong mentors, many of them women, remarkable for their time, who were pure in their pursuit of leading by example, setting high standards for patient care and education, yet able to show the joy in their work and the human aspects of medicine.

"Dr. Dorothy Barbo, one of our mentors, often bought Chinese food for everyone on shared call nights, but no forks allowed," Tuttle says. "Mastering the use of chopsticks was a surrogate for improving manual dexterity for surgeons; but, more importantly, eating together equalized everyone, improving respect, communication and teamwork as we cared for patients."

That's why Tuttle and Piper have created the Deborah Tuttle, MD and John Piper, MD Vice Dean for Educational Affairs. As an endowed chair, the gift supports the school in perpetuity and will help enrich the lives of the next generation of physicians training at Drexel University College of Medicine. The inaugural Tuttle-Piper Vice Dean for Educational Affairs, Valerie Weber, MD, views the chair as a powerful way to continue to encourage educational innovation, research and continuous improvement contributions that will surely have rippling benefits for students long into the future.

Specifically, the endowment provides discretionary funding to the vice dean, who can use it to support her or his educational priorities. That might include curriculum innovation, travel grants for students or investment in new technologies.

"We know there continue to be new challenges in medicine, and education needs to continue to meet these challenges," Piper says. "Like many good

things, the inspiration to support medical education came from a personal loss. Deborah's mother died of decompensated aortic stenosis, a diagnosis that was not recognized before it became critical. We decided to establish a lectureship in cardiology to support education in this area. We have seen the power of this gift through the exceptional quest lecturers Dr. Eisen [Cardiology Division chief] brings to Drexel each year. We realized we could and should do more.

"We are thrilled that Dr. Weber is the first named vice dean. Her innovative ideas and leadership in medical education are already widely recognized. We know the endowment funding will be well used, with the overall goal of strengthening meaningful and impactful education for future physicians."

# ledicine ledicir

For Drs. Piper and Tuttle, the practice of medicine has been not a job but a lifetime of learning.

#### **Challenges and Rewards**

Shira Yudkoff

Tuttle and Piper both attended medical school with the help of the U.S. Air Force through the Health Professions Scholarship Program – he at the University of Wisconsin and she at the Medical College of Pennsylvania. They met at Brooks Air Force Base in San Antonio, Texas, at the School of Aerospace Medicine, one of the active duty commitments required by their scholarships. Piper decided to transfer to MCP to be with Tuttle.

Completing residencies and fellowships in the military, Tuttle became a neonatologist and Piper an infectious disease specialist. They served as officer physicians in the Air Force, and then joined practices affiliated with Delaware's Christiana Care Health System in Newark.

Tuttle and Piper each come from a family of educators, and as

a couple they have committed their lives to patient care and educating future physicians. Tuttle's group teaches pediatric residents and neonatal fellows at Christiana Hospital, and Piper has been involved in teaching in most of the Christiana Care residency programs through his infectious disease practice.

"While we were not from physician families, the challenges and rewards of teaching were passed along to us," Tuttle says. "Students challenge you to be up to date and to prove both the what and the why of what you are teaching. They make you better. We teach every day - not only to residents and fellows, but also nurses and patients. We have also learned how rewarding it is to see the success of our former students. Being physician educators helps us to honor and continue the teaching legacy of our parents and grandparents."

#### **Commitment to Community**

In addition to their practices and teaching, Tuttle has served as the medical director of Christiana Care's Mothers' Milk Bank and the physician director for Neonatal Performance Improvement Initiatives. She and Piper have shared interest and collaboration in research in health care-associated infection and molecular epidemiology.

This latest gift is just the most recent example of their generosity toward their alma mater. In addition to the Kathryn J. and Charles

B. Tuttle Lectureship Fund for Cardiology, honoring Tuttle's parents, they also created the Deborah Jane Tuttle, MD '82 and John P. Piper, MD '83 Endowed Scholarship Fund to make medical school more accessible to students.

The couple is active in other community outreach efforts. Drawing from her own experience as both Air Force officer and doctor, some of Tuttle's clinical work enables her to care for families from Dover Air Force Base. She also serves on the Advisory Council of the Ronald McDonald House of Delaware. The couple's love of dogs led them to establish a research grant at the University of Pennsylvania School of Veterinary Medicine.

Tuttle and Piper have been inspired by the Drexel medical students they have met at the annual Benefactors Brunch and by

the technological advances on campus like the state-of-the-art Simulation Center. Also, Tuttle says, the Drexel students and residents she encounters in her practice are well prepared. "That makes me feel good and makes me want to continue to support the school," she says.

"The medical school has undergone some challenges," Tuttle says, "but really found stability as part of Drexel University. This is an exciting time for the school. We can never give back all we have been given, but are honored to have a small part in the future of medical education."

A career in medicine and caring for vulnerable patient populations is itself a way of endowing society, but this couple clearly values the concept of paying it forward.





How do you leave your practice for weeks on end, plunge into daunting conditions where crowds of patients await your skills, and give more care with fewer resources than would even be deemed possible at home? **"It's a privilege,"** says alumna Libby Wilson. **"It makes me grateful,"** says Sue Benes. **"I was lucky,"** says Gerald Rothacker. This culture of service is a common thread from the legacy schools — Hahnemann, Woman's Medical College and Medical College of Pennsylvania — to Drexel College of Medicine. But the "pioneers" report some harrowing learning experiences.

## Vision Beyond Borders



**SUE BENES, MD, MCP '75**, is a neuro-ophthalmologist who has traveled and served all around the world. She recently moved to Colorado after 35 years of practicing in Ohio and teaching residents at The Ohio State University College of Medicine.

My first opportunity to travel overseas

was in 1980, when the government of Kenya asked the U.S. to provide a volunteer faculty for the first class of ophthalmology residents on the continent of Africa. We also set up a clinic out in the country.

We'd go village to village assessing how many people were ill, needed medical treatment, or needed surgery. The most prevalent need was for cataract surgery. We'd ask the leaders of the village to vote for a person who'd be their clinical officer or liaison between us and the village, their "barefoot doctor." We'd teach them how to screen height, weight and head circumference, how to have clean water and how to separate waste from the water — basic preventive medicine.

Since the new ophthalmology residents in Nairobi were too far away for these rural villagers who were blind from cataracts, we'd set up a day for the blind at nearby Nyeri Provincial General Hospital. We'd teach the clinical officer, slowly but surely, how to take out cataracts of their relatives and neighbors. It probably wasn't strictly legal, but it was the quickest way we could think of to get enough trained hands to help the Kenyan people.

#### **MAKING AMENDS**

Later I was recruited by the FBI to work with the Department of Energy in the Marshall Islands, helping people who had been exposed to radiation from U.S. nuclear tests [which took place between 1946 and 1958]. The testing was done on islands that had been evacuated, but the fallout resulted in many people being irradiated. We were so ignorant, at the time, of the power of atomic energy that we even miscalculated where the winds would go.

We volunteers took an old barge and turned it into a hospital. Then we'd go from atoll to atoll, bring people to the ship, and check them. Thyroid cancer was really prevalent.

If I thought a person had thyroid cancer, they needed an ultrasound-guided biopsy. If the biopsy was positive, they'd need a thyroidectomy. The government gave us money to fly the person and their spouse — it was mostly women with thyroid cancer — to Hawaii for the ultrasound and biopsy. Then they'd be flown to the Cleveland Clinic for the thyroidectomy. Then to Washington, D.C., where they'd undergo another series of tests — kind of a whole-body Geiger counter. Then they'd fly home to the Marshall Islands, and there would be a cash settlement. The men would take the money. In that culture, the men own the money, and the women own the land. The woman would stay on her land, and the man would move on to another lady with a big neck. We had good intentions to do the right thing by these people, but it never occurred to us that when you make a system, people quickly learn how to take advantage of it.

In the village of Utirik on Utirik Atoll, a 98-year-old woman told me this story: A Russian sailboat landed on their beach,

The villagers accepted us because we were working as a team with somebody in their own village. Also, I took my 5-year-old daughter with me. I think it broke the ice to have a lady who was a mom and was also a doctor.

Dr. Benes (right) teaches a non-physician, "a village barefoot doctor," how to take out a cataract in Kenya in 1980. Note the bare hands and lack of light.





and the Russian sailors told them, "You live in paradise on earth. The only thing Russia has that's better is this stuff you can go sliding on or skiing on. You can go down mountains. You can make little balls of it and roll the balls, and build a man." On the beach, the Russians made angels in the sand and said you could do the same thing in snow. People were trying to picture this. So when our bomb testing created white fallout, people thought God had sent them a miracle. They sent the children out "to play in the snow." These children died of gamma poisoning. One of the woman's sons died of leukemia. So here she is, 98, telling me this story. It became clear how we'd changed the lives of these people.

#### **MAKING DO**

Three years after the Soviet Union fell, I went to the Republic of Georgia. No longer was there any electricity, gas, water, or money from Moscow. The Russians took the medical supplies and surgical instruments and closed the hospitals. So the Georgian doctors couldn't take care of patients. The chairman of ophthalmology there wrote to America and said, "Please. Send us someone to bring us aid."

We landed in Tbilisi at 3 in the morning. Underneath the plane, I had 18 crates that we had to figure out how to unload without power for the electric conveyors and automatic doors.

Each Georgian doctor was allowed to bring one patient — the sickest. So 175 doctors and 175 patients were standing in a row at 3:30 in the morning, outside of a closed-off hospital, trusting the Americans would come and bring the equipment and medicine.

We'd do surgery with the doctor who had brought the patient. They hadn't been able to do any surgery in four and a half years, so they were rusty. I brought a generator so we could generate enough electricity for a surgical microscope. We brought buckets so we could make a bucket brigade from the creek to flush a toilet.

#### **RISK/REWARD**

Every time I went overseas, I was making no money, but I still had practice expenses at home: rent, loans for my equipment, employees and their benefits. That risk was well worth it. It inspired me to come back re-energized. It made me more grateful for the blessings we have in this country. Having seen bad things our country may have inadvertently done, but how we stuck with the people and decided to make it right — that makes me prouder to be an American. I'm so grateful I have the freedom to do these things, to serve as an American to try to make the world healthier.

I'm also grateful to my ancestors who were physicians who served overseas and made me dream of doing service work when I was just a child. One of them was Dr. Jessica Royce Carleton, who graduated from Woman's Medical College in 1886 and lived the rest of her life in India serving in a hospital for women and children, teaching medicine and surgery. I will also be eternally grateful to those who taught me at WMC/ MCP/Drexel and at the Wills Eye Hospital (residency and fellowship), as they gave me the academic and practical knowledge to know what to do in many different places in the world, and to touch and care for people with respect and compassion wherever I am.

## Finding a Fit



After several attempts at mission work that didn't quite "fit," **GERALD ROTHACKER**, **MD**, **HU** '**76**, found his connection with Mbingo Baptist Hospital in Cameroon and has gone there annually for the past five years. Recently retired from his orthopedic practice in Lancaster, Pa., he is already planning his next trip to Cameroon.

I always wanted to do mission work, to give back, but I never felt like I had the opportunity. I went to New Orleans after Katrina, but that was mainly construction. When the earthquake hit Haiti in 2010, another mission opportunity opened. That was truly my first overseas mission experience, yet I came back thinking, "That's neat, but that's not where I should be going."

The following year, I went on a mission trip in Iraq, to Erbil in the Kurdistan region. Our task there — we were actually hosted



by the Kurdish military — was to help open a mothballed hospital facility. Every day we ran clinics for the Kurdish military, their families, and friends. That was a fascinating experience, but it didn't use my skills as an orthopedic surgeon.

Then the door opened for me. One of my partners went to Cameroon through Samaritan's Purse, an international relief organization. He met a general surgeon there from the United States who was a long-term missionary. That fellow, Dr. Jim Brown, came to Lancaster at my colleague's invitation and delivered a presentation on what he was doing at Mbingo Baptist Hospital in northwest Cameroon. He presented an unbelievable wealth of pathology and basically invited all the doctors there to come over. I thought, "This may be just right."

#### **INTO THE BREACH**

So in November of 2012, I went to Cameroon through Samaritan's Purse as well. It was an enlightening experience. About 80 percent of the patients I treated had fractures, and many had been neglected for months — or even years — until the patients were sure they weren't going to recover or until they could afford medical care. In Cameroon, patients do not go into surgery until they've paid the bill, even for open fractures that are through the skin — they get washed and put in a splint. There's an occasional exception if a person has absolutely no financial wherewithal, for example, a widow or an orphan; the hospital will give them the opportunity to pay after they've been treated.

I see kids with deformities, often because of vitamin D deficiency. I also treat a lot of children with chronic bone infections, not from injury, but from an infection like strep. That was not uncommon in the United States 60 years ago. But in my 35 years of practice, I had never seen a true chronic osteomyelitis — where a child had an ear infection or strep throat, and the bacteria in the bloodstream spread into a bone. In this country, if that happens, it gets treated so quickly, it never gets to the stage we call chronic.

Mbingo Baptist Hospital is about 250 beds [about the size of Pennsylvania's Easton or Chester County Hospital]. But it's a Cameroon hospital, and in Cameroon hospitals, the patient's family provides for the basic needs of the patient. The family The equipment may be old and dull, but you use what's there, says Rothacker (at right). What stands out is the people.

takes care of the meals and hygiene. The nursing staff does vital signs, changes dressings, and passes out medicines.

The equipment we use is basically 1950s–1960s style and donated from the United States. Surgery is done by looking at a preoperative X-ray, judging where you have the pieces, and hoping they're all right when you finally do get another X-ray after the surgery. There is no X-ray available in the operating room. That's now completely foreign in the U.S. We're so dependent on our image intensifier X-rays.

When it comes to the things we implant, like plates and screws, you have to use what's there. Many plates are reused when they've been removed from a patient. The first year, I was sort of shocked. This last year, it didn't shock me anymore. It's just the way it is.

What stands out is the level of devotion people have. Dr. Brown belongs to PAACS, the Pan-African Academy of Christian Surgeons. It was founded by a doctor-missionary about 25 years ago. He realized that he'd helped thousands of people, but when he retired, they'd be left just like they were before. So he started PAACS to train African doctors as general surgeons to stay in Africa. The goal is to have trained 200 surgeons by 2020. I usually have one of the surgical residents assigned to me, so I get to teach some orthopedics for the two weeks.

Physicians reading this are going to say, "That's interesting. What that guy did, I would like to do. He was lucky to find this Dr. Jim Brown to open the door." I would just put in a plug for Samaritan's Purse. They're always in need of doctors. Anybody who's looking for that door and wants to pull it open and see opportunities — that would be the place to start.

# A World of Children's Faces



**LIBBY WILSON, MD, WMC '63**, a pediatric plastic and reconstructive surgeon

in Los Angeles, is an expert in cleft palate and other craniofacial reconstruction. She has lent her skills to healing children and training colleagues in Cambodia, China, Israel, Peru, the Philippines and other countries throughout her career.

Cleft palate is not limited to one specific ethnic group. It affects everybody. You can minimize a very obvious birth defect that might have prevented someone from being able to achieve the goals in their life.

Other conditions are endemic to certain areas. In 1979, I traveled to Sri Lanka, where the population that works in the tea fields chews betel. (Betel chewing is common in many Asian cultures for its psychoactive properties.) The betel nut itself is not carcinogenic, but to get the alkaloid released, they soak it in lime. You put that in your cheek, and eventually a cancer tumor develops. Ultimately the inside of the cheek eats through. I was there to reconstruct the cheek after the tumor was removed.

I try to read up when I go anywhere I haven't been before — find out something about the culture, and if possible, talk with someone from that country who's here in the States.

My next trip was to Yucatán with the Friends of the Americas. We worked at the Social Security Hospital and reconstructed a number of adults with cleft palates and tried to train local surgeons to do the surgery. Training became one of my subsequent goals. The service is wonderful for the families, but training sustains the work. That was the dawning of, "If you're going to do something, you've got to visit multiple times and establish something that is self-sustaining."

#### **BUILDING RELATIONSHIPS**

My sister and I went to Nepal in 1984 to go hiking. I fell in love with the country. Everybody goes because they want to hike, and you just fall in love with the people.

The next year, I went back and worked with a clinic with a religious affiliation. They introduced me to the chief of surgery at the Teaching Hospital of Tribhuvan University Medical School, which was the only medical school at the time. A year later, I went back with a group from Interplast (a nonprofit that provides free reconstructive surgical treatment to those in urgent need around the world). On that trip we got the local surgeons involved and continued their training. So now we have two cleft palate programs in Kathmandu. They established that they repair the lip at 3 months, the palate at 10 months, and the gums at 10 years. They have that ongoing relationship with patients.

Our last working trip to Nepal, in 2001, was to one of the Zonal Hospitals. We had a person trained in Kathmandu who did the follow-up. Those trips are interesting because you have a hundred people show up on day one. Everybody in Nepal had a radio, and public address announcements were broadcast just before the news. They'd hear the message and start walking. In Nepal, it can take 10 days to get from your village to a paved road where you can catch a bus to our location. And that's an overnight bus ride. They'd all be there waiting when we arrived.

# Following in the Footsteps

Like their alumni role models, many students are drawn to global health, and they increasingly want to serve overseas on summer assignments or elective rotations. In response, two years ago the College established the Office of Global Health Education to facilitate safe and ethical experiences. Nielufar Varjavand, MD, director of the office, who did a rotation in a Native American community when she was in medical school, is an advocate.

"I really believe students need to learn about the health care systems of all communities, not just the one where they're studying medicine," she says. "Diseases are different across the world, and the more students see, the better." With her guidance, students have traveled to dozens of countries, from Albania to Zambia, hoping to learn and to make a difference. Look for their stories in the next issue of the Alumni Magazine.

We'd get them organized into some kind of a safe schedule once we checked out the equipment and made sure we'd have an anesthesiologist. We had speech pathology and dentistry. We'd bring a whole team and work with our counterparts. We'd organize a day of lectures — a real professional meeting. It was probably my longest association and definitely personally rewarding.

More recently, I've been going to Peru, to a community on the plateau, Ayacucho, with a group from our hospital. I've been doing that for about five years now. We've seen the kids coming back, and it's nice to see that. I have plans to go back to Peru in June 2017.

#### **TREAD SOFTLY**

It's a real privilege to do what I've done in the areas where I've been. It's about what gets accomplished in the appropriate way. It's really important to understand what the local situation is. Go in with an open mind, not a preconceived notion. Remember what you're offering may or may not be a high priority where you're going. That's why it's important — though you may not get a full sense — to try to read something about it in advance. Then find someone who is an ex-pat from the area.

A story that is meaningful to me was told by an anthropologist who spent three years with a Mayan group outside of southern Mexico. He spent the first month just sitting on the corner of the plaza, not interacting with anybody. "I just wanted them to get used to seeing me," he said. You don't enter loudly.

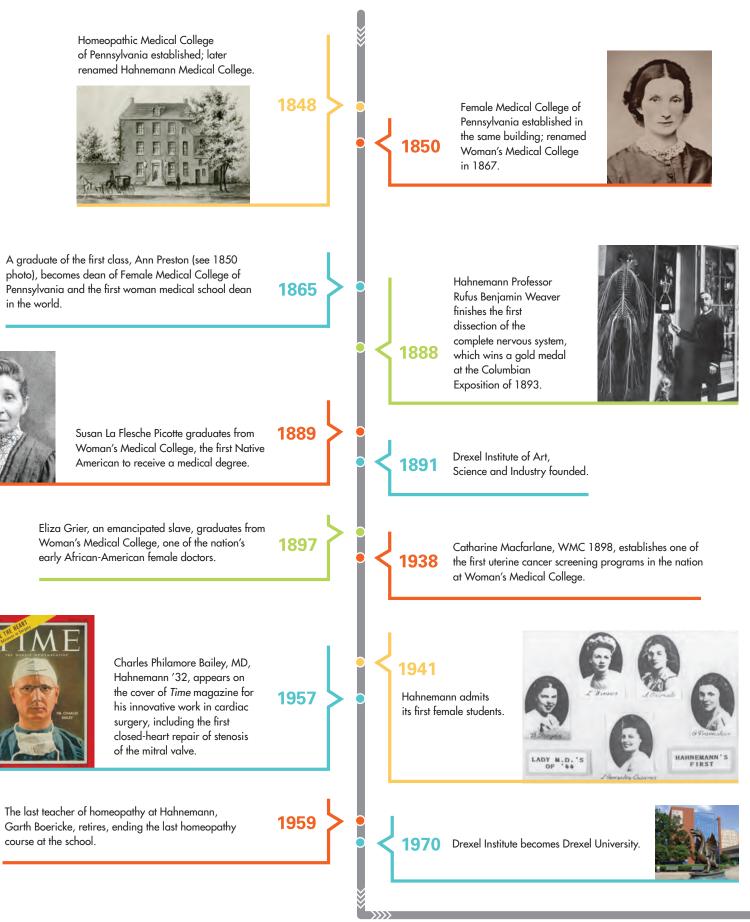
Walk in quietly. Observe. Don't jump into the middle and *do* before you have a chance to observe and see what's going on.

You want to build a legacy that's not dependent on your coming back all the time. Somebody is there to take over. That, to me, is a very important principle.

On a trip to Israel, Libby Wilson (center) worked with surgeons who perform cleft palate surgery on the West Bank.

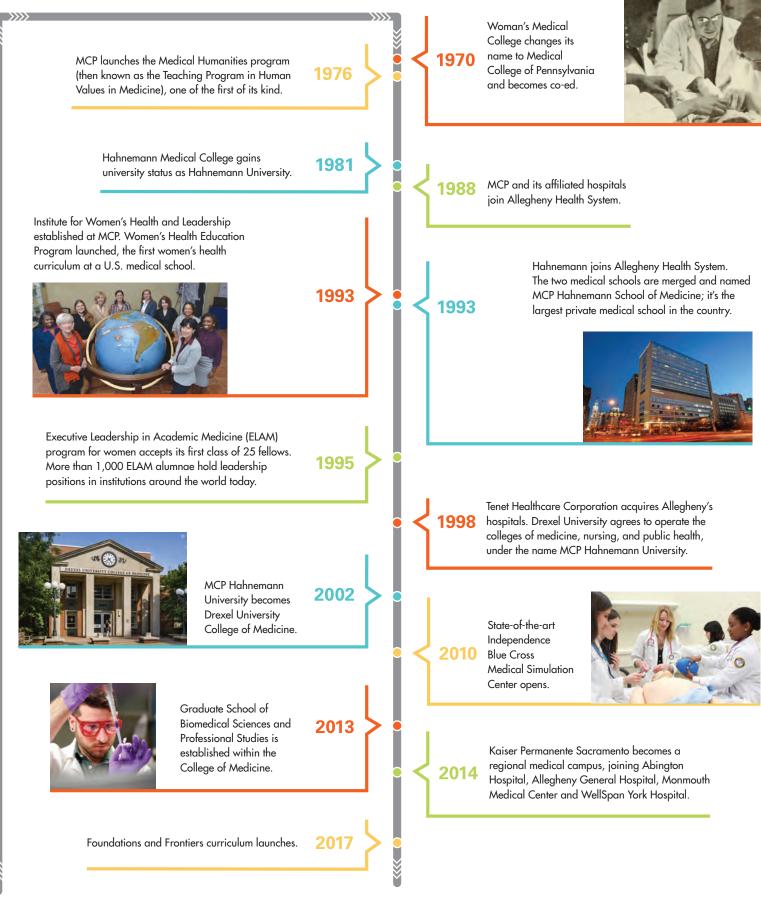


# **FAMILY ROOTS**



# **AND BRANCHES**

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Ana E. Núñez, MD, was appointed to the newly created position of associate dean for diversity, equity and inclusion for the College of Medicine and the College's Graduate School of Biomedical Sciences and Professional Studies in April 2016. She also directs the Center of Excellence in Women's Health and the Women's Health Education Program at the College of Medicine. Núñez is a nationally recognized medical education leader in women's health, curricular reform and cultural competency.

Dr. Núñez and Michael Donneyz at the new-student diversity reception

# Ana E. Núñez, MD

Associate Dean for Diversity, Equity and Inclusion Professor of Medicine, Division of Internal Medicine

#### WHAT ARE YOUR OVERALL GOALS

for diversity, equity and inclusion? Diversity, equity and inclusion doesn't happen just for its sake alone. It's how we achieve excellence in our mission as a College. We're about being great teachers, great doctors and great researchers, and training people to continue in that path. In doing so, we must be mindful of the diverse populations on our campuses, address issues of unconscious bias, and make sure that everyone is in a place to be able to learn and participate fully, and achieve excellent educational outcomes.

# HOW WILL YOU ACHIEVE these goals?

My job is to promote measureable organizational change. That happens by integrating all facets of the organization for all stakeholders. It means working with others across the continuum — from recruitment and retention to promotion. My goal is to eliminate silos and introduce people working on similar efforts. We will have a much bigger impact and make faster progress as we work together.

#### WHAT INITIATIVES

#### are you working on?

Building a model of diversity, equity and inclusion is a long-term initiative that requires many short- and medium-term initiatives and

interventions. Building upon the new holistic review and recruitment for medical school applicants, our charge from the Dean was to address the lack of black men in medicine. I have convened internal and external advisory groups to help strategize solutions. We are also creating Diversity Action Councils with diverse representation. This will enable us to have cross-cutting information about what's happening in different areas of the College and Graduate School. St. Christopher's, for example, is spearheading Diversity Grand Rounds. In resident education, new wellness events have been developed. We are also reformulating our faculty Committee for Diversity and Inclusive Excellence to engage current and new members.

Pipeline programs that support enrollment into the College are important. Our unique Drexel Pathway to Medical School affords underrepresented students enrichment for future success and a guaranteed seat in the class. This Graduate School program is being evaluated to enhance our impact as a "college of opportunity," a goal that is very important to Dr. Schidlow.

Another initiative is bias-mitigation training, including a program for faculty search committees, admissions committees and resident workshops. Training raises awareness of unconscious bias related to gender, ethnicity and LGBT status, and develops our skills to help each other minimize its unintentional impact, thus ensuring that we invite the most talented individuals to join our ranks.

The office works to build community. We sponsor events that involve outreach to students, including racial and ethnic minorities as well as LGBT people. And we promote greater awareness of the rich diversity of the College by celebrating diversity.

Our office is unique in that we include sex and gender health equity. I also connect individuals and groups to help address some of the national issues we face, such as the mass shooting in Orlando and the Black Lives Matter movement. We are also creating a timely and responsive web presence (drexel.edu/medicine/diversity).

#### HOW WILL YOU MEASURE vour success?

your success?

We must ask hard questions. What is it about the individuals in our organization that lets them thrive or makes them struggle? What does our environment allow regarding inclusivity, voice, safety and respect? What do we do incredibly well and why? What do we need to change in our environment to make it more inclusive, productive, safe and respectful so more people thrive rather than struggle? We are developing metrics to highlight that change.

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Purchase a **White Coat** for a first-year student. Write a note of congratulations and encouragement to be delivered at the White Coat Ceremony.



Give to the **Health Outreach Project (HOP) Clinics**, a student-run initiative to provide health care to underserved populations.



Support **Discovery Day**, an annual showcase for PhD, MS and MD candidates, residents and fellows to present their research.



Continue a 24-year tradition by donating to the **Pediatric AIDS Benefit** held by students and faculty to support the Dorothy Mann Center at St. Christopher's Hospital for Children.

#### Questions? Contact Leah Cianfrani at ljc56@drexel.edu or 215.762.2236



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# umni Calendar

**MAY** 18–20

**Alumni Weekend** drexel.edu/medicine/alumniweekend

**Classes of 1967 Dinner** The Union League of Philadelphia

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**College of Medicine Commencement** The Kimmel Center

## AUG

White Coat Ceremony



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**Discovery Day** 

## MAY 2018 ALUMNI WEEKEND

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