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COM Outlook

College of Osteopathic Medicine

Spring 2019

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College of Osteopathic Medicine

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Our distinguished KPCOM alumni are making significant contributions to health care and humanity on many levels. If you have a compelling story you would like to share with the readers of *COM Outlook* about your life or career, please contact Scott Colton at *scottc@nova.edu*.



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NOVA SOUTHEASTERN UNIVERSITY George L. Hanbury II, Ph.D. President and Chief Executive Officer

HEALTH PROFESSIONS DIVISION Frederick Lippman, R.Ph., Ed.D. Chancellor/Special Projects

Irving Rosenbaum, D.P.A., Ed.D., M.P.A. Vice President for Operations

DR. KIRAN C. PATEL COLLEGE OF OSTEOPATHIC MEDICINE Elaine M. Wallace, D.O., M.S.⁴ Dean

EXECUTIVE EDITOR

Scott Colton, B.A., APR HPD Director of Medical Communications and Public Relations (954) 262-5147 • scottc@nova.edu

ART DIRECTOR

Susan Tischenkel-Hayward Associate Director/Senior Graphic Designer Office of Publications and Creative Services

COVER ARTIST Natalia Ochoa, Illustrator

OFFICE OF PUBLICATIONS AND CREATIVE SERVICES

Bernadette Bruce, Director Sheryl Koral, University Editor Carol Reynolds-Srot, Associate Editor/Copywriter Roberta Harris-McCafferty, Production Manager

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LEADERSHIP Exchange



Greetings from NSU's Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM). To say this has been a busy few years would be a dramatic understatement.

The college continues to implement new programs, including undergraduate and graduate nutrition, undergraduate public health, and an emergency medicine certificate for physician assistants, as well

as fellowships in allergy, immunology, rheumatology, and urology research. The college's faculty and staff members have contributed greatly to our success with innovative ideas, enhanced technology offerings, outstanding teaching and patient care, and old-fashioned hard work.

On the west coast of Florida, the Tampa Bay Regional Campus in Clearwater is approaching its completion. Once it is finished, the KPCOM will have an additional D.O. site and, as soon as the site receives Commission on Osteopathic College Accreditation from the American Osteopathic Association, 150 new D.O. students will begin their program of study there. The 30-acre campus, surrounded by lush vegetation and Tampa Bay, has state-of-the-art equipment and facilities. It will be a wonderful place to call home for students and faculty and staff members.

Elaine Wallace, D.O., and Ken Johnson, D.O., have been working with local and regional health care partners, and it is expected that these new affiliations will enhance opportunities for students and pave the way for the development of graduate medical education (GME) programs. Increased GME positions are imperative to help reduce physician shortages in Florida and the United States. Many months of planning have resulted in commitments from Advent Health, HCA, and the Orlando VA Medical Center. These efforts will accelerate in earnest with the opening of the new campus.

The KPCOM will continue to move forward in amazing ways. New programs and curricular innovations are on the drawing board, while innovative research continues to grow. There is no doubt that our college will remain on an upward trajectory, and rise to even greater heights, in the coming years.

Guy M. Nehrenz, Ed.D., M.A., RRT

Senior Associate Dean of Osteopathic Medical Education Dr. Kiran C. Patel College of Osteopathic Medicine

HPD COMmuniqué



As we enter a significant era of change in health care education, Nova Southeastern University's Health Professions Division (HPD) serves as a sentinel for the academic health care community when it comes to modeling the evolving paradigm of health care training.

Since the inception of Southeastern College of Osteopathic Medicine in 1979, the late Morton Terry, D.O.—the founder of the

HPD—frequently explained that health care had to be a collaborative, interdisciplinary endeavor. It is a precept we continually incorporate in our classrooms through our curriculum and in our academic infrastructure.

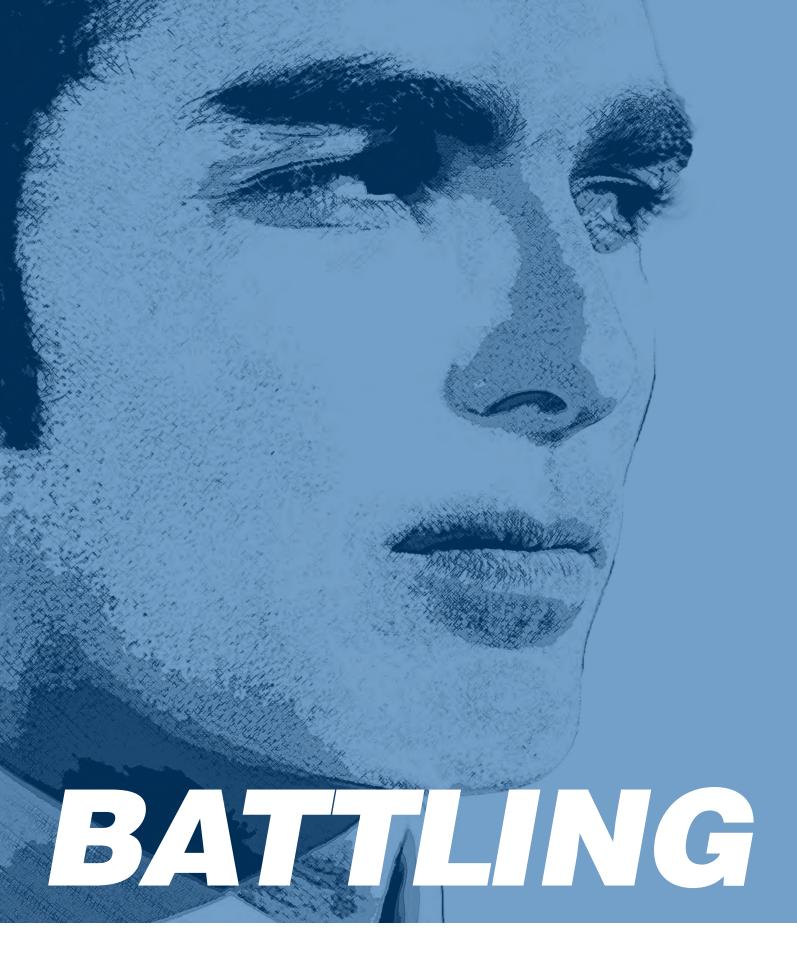
Because of decisions made decades ago, dramatic shortages in specific health care professions such as physicians, nurses, pharmacists, and dentists—are occurring throughout the United States. To offset these shortages, what used to be known as the allied health profession has evolved into individualized professions, such as occupational therapy, physician assistant, and physical therapy.

Florida, which is a retirement destination for many senior citizens, has the highest percentage of people older than 70 of any state in our country. As health care has evolved, seniors are no longer placed into long-term assisted living facilities or nursing homes after they suffer broken hips or other catastrophic falls, which was often the case in the past. Instead, they are cared for and holistically rehabilitated by an interprofessional team of health care experts. They become whole and vital again in their home-care environment.

I truly believe Dr. Terry had this interdisciplinary approach in mind when he created Southeastern University of the Health Sciences in the 1980s. He saw his ideas as a harbinger of what could help people live an additional decade or so. This is what I consider as the hallmark of the Health Professions Division.

People want good health, and the best way to achieve it is by receiving interprofessional, collaborative care from a dedicated team of health care professionals. NSU's Health Professions Division is doing an extraordinarily fine job of teaching its students to do just that.

Frederick Lippman, R.Ph., Ed.D. Chancellor, Special Projects Health Professions Division



How a Texas-sized blunder prompted examination of gender-based pay gaps in health care

BY SCOTT COLTON, B.A., APR

n September 2018, Texas physician Gary Tigges, M.D., made national news—and incurred the ire of countless female physicians—when he made disparaging remarks about his female colleagues in the *Dallas Medical Journal*'s Women in Medicine issue.

"Yes, there is a pay gap," said Tigges about the sizable salary disparity. "Female physicians do not work as hard and do not see as many patients as male physicians. This is because they choose to, or simply don't want to be rushed, or they don't want to work the long hours. Most of the time, their priority is something else—family, social, whatever. Nothing needs to be 'done' about this unless female physicians actually want to work harder and put in the hours."

Not surprisingly, the backlash was immediate, not only on social media, but in coverage from news outlets like *The Washington Post*, Fox News, and CNN. To mitigate the media maelstrom, Tigges offered a swift mea culpa.

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BATTLING BIAS

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"I sincerely apologize to all female physicians for my comments and the pain they have caused," he said in a statement. "My response sounds horrible and doesn't reflect what I was really trying to say. I'm not saying female physicians should be paid less, but they earn less because of other factors."

Female physicians have made significant advances over the past several decades, with women now comprising more than one third of the physician workforce and nearly half of all physicians-in-training. Unfortunately, while it is easy to dismiss the comments of one

ADDING FUEL TO THE INEQUITY FIRE

In November 2018, Reuters reported that Tokyo Medical University—one of Japan's top medical schools—spent at least a decade purposely lowering women's entrance exam scores to ensure that some of them were unable to attend the prestigious school.

The university's administration recently took steps to rectify this egregiously discriminatory practice by offering spots to 101 female applicants who were wrongly denied entrance in the past two years. Still, the fact that the medical school acknowledged



"I own a private practice, work 8 shifts a month in an urgent care facility, and do 30 hours of telemedicine each week."

—Katarina Lindley, D.O., FACOFP

male physician as a random outlier of opinion, evidence to the contrary abounds.

For example, female physicians earn significantly less than their male peers regardless of where they live or their medical specialty. According to a recent survey by Doximity—a social networking service for health care professionals—the pay gap for female physicians in the United States is growing.

The survey revealed women earned an average of 16 percent less a year than their male counterparts did in 2017. In April 2018, Medscape's Physician Compensation Report exposed the concerning fact that the sizable gender pay gap is increasing for primary care physicians. When you factor in pay for specialists, the gender gap widens to a disturbing 36 percent.

Several causes have been cited to explain the widening compensation imbalance, including specialty choice, years of experience, number of hours worked, choices made to balance work and family, and the lack of role models and mentors. Interestingly, researchers find these disparities even when they are monitoring for the aforementioned factors. lowering exam grades of female applicants to keep the percentage of female students lower than men illustrates the enormous inequities that still exist for female physicians worldwide.

To gain a clearer understanding of why these archaic attitudes still exist at a time when we, as a society, are supposed to be more enlightened than ever, *COM Outlook* enlisted the input of several of its alumnae and female faculty members. Their insights reveal a wealth of opinion on why these attitudes still exist and what can be done to help elicit change.

NSU ALUMNA WEIGHS INTO THE DISCUSSION

Tigges' comments prompted 2004 KPCOM alumna Katarina Lindley, D.O., FACOFP, to share details of her extraordinarily busy life. "There was recently an article by a male physician in Dallas saying how female physicians do not work that hard, and that is why they get paid less. It's 11:17 p.m. on a Tuesday, and I just got home from my office," she posted on her Facebook page.

"I saw my children this morning for 45 minutes before I dropped them at school, and then their nanny



"The attending seemed to intentionally push the male residents in terms of giving them the more-challenging, complicated patients."

—Jill Wallace-Ross, D.O.

brought them to my office at 5:00 p.m. for a drive-thru kiss and a hug," Lindley added. "I wonder what that male physician is doing right now. Most likely, he's in bed sleeping while I have a headache and feel too wired up to go to bed despite being exhausted."

Although Lindley is a devoted wife and loving mother to her five children, she devotes ample time to her civic and professional obligations. "To give you an idea of how busy I am, I own a private practice, work 8 shifts a month in an urgent care facility, and do 30 hours of telemedicine each week," said Lindley, who was recently elected to her local school board and is the president-elect of the Texas Society of the American College of Osteopathic Family Physicians.

LACK OF AWARENESS

Lindley, who works 60-plus hours a week, said gender bias from her male peers is a byproduct of their lack of awareness of what female physicians with families deal with daily. "I often feel that male physicians do not understand the challenges of being a full-time physician, a mother, and a wife," she said.

"I have said on multiple occasions that once my workday ends, my real job starts. I come home to five children, start dinner, help them with their homework, get them bathed, do story time, and then put them to bed," Lindley explained. "After a full day of work, all this can be quite daunting. Let's be honest. Most male physicians do not have the same responsibilities at home that female physicians do. Am I generalizing? Maybe. However, I have watched my female colleagues deal with the same challenges as me, so I think this is still the norm."

While the female physicians interviewed for this article said they had not encountered extreme forms of gender bias, there have been instances where it was couched in a subtler, yet equally abhorrent, fashion. "During my residency training, it was common for the attending male physicians to release the female residents who had children earlier in the day than other members of the team," said Jill Wallace-Ross, D.O., a KPCOM alumna and assistant dean of osteopathic clinical education.

Interestingly, Wallace-Ross disclosed that the male physicians who had children were not offered the same option. Instead, the attending physician would make disparaging comments to the other residents about the fact that one or more of the female residents had left.

"If we chose to stay, then we females heard what the attending was saying about the other female who did leave, which were statements that implied an inherent weakness, or less fortitude. The male residents received praise and admiration for staying, which led the male residents to take on some of the actions and words of the attending," Wallace-Ross explained.

"Looking back, the attending seemed to intentionally push the male residents in terms of giving them the more-challenging, complicated patients, as well as having the male residents be the first choice to see a new consult," she added. "Although our pay was the same, the intensity of the work with some of the male doctors was clearly uneven based on gender."

OLD BOYS' NETWORK

According to Naushira Pandya, M.D., CMD, FACP, professor and chair of NSU-KPCOM's Department of Geriatrics, some of the gender-biased actions described by Wallace-Ross can be attributed to what used to be referred to as the "old boys" network. "Many young men are not narrow-minded; however, male chairs and older administrators may still hold some biases," Pandya explained. "I have usually had salaried



"I can never be certain I was being paid the same as similarly qualified male colleagues."

—Naushira Pandya, M.D., CMD, FACP

positions in my career that were not based on the number of patients seen. However, I can never be certain I was being paid the same as similarly qualified male colleagues."

PREJUDICIAL ATTITUDES STILL EXIST

For a country as progressive as the United States, it is still difficult to fathom that women only acquired the right to vote a century ago when Congress ratified the 19th Amendment to the Constitution on August 18, 1920. What is not so difficult to comprehend, however, was the predicament faced by Elizabeth Blackwell, M.D.—the first woman in the United States to earn a medical degree.

When Blackwell received her M.D. degree from New York's Geneva Medical College in 1849, she graduated at the top of her class. Sadly, although she had received the necessary training and degree, the medical community banned her from practicing medicine. What followed were years of frustration as she sought to practice and prove herself in a maledominated profession.

Although circumstances for female physicians have improved greatly since Blackwell's time, remnants of these prejudicial attitudes still exist. "I believe gender bias is entrenched in society based on the cultural norms in which we are raised. The belief that women don't work as hard, don't see as many patients, don't want to work long hours, and are distracted by outside interests is such a gross generality," Wallace-Ross said.

"I immediately counter those messages internally and dismiss the comments of the Texas physician as someone whose opinion of me does not matter," she added. "I care less and less about what others think of me as a woman physician and try to just do my best, be the best me possible, and enjoy the fruits of my own labors."

Paula Anderson-Worts, D.O., M.P.H., a KPCOM alumna and assistant dean of faculty affairs, said the comments made by the Texas physician represent some of the challenges faced by women in medicine. "Gender bias and lack of cultural sensitivity are common in the medical field. In many cases, the misperceptions about women in medicine are due to egocentricity, lack of knowledge, and inexperience," she added.

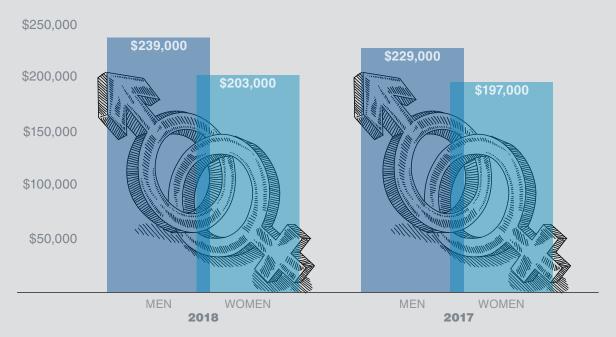
Pandya provided an interesting theory on why she thinks some aspects of this bias still exist. "Women physicians tend to be more modest and less vocal concerning self-promotion and documentation of their achievements," she explained. "They think doing a great job is all part of what they signed up for, so they do not take credit for all the hard work they do. I had to learn to be more forthcoming and less modest about taking credit for my work and any innovations or improvements I was responsible for implementing."

MOVING THE NEEDLE ON GENDER BIAS

Despite considerable progress, it is clear more needs to be done to bridge the many gaps that still exist for female physicians. "Whatever the origin, it may or may not be possible to change the worldview of an individual physician by proving him wrong," Wallace-Ross said. "I feel the proof is in the actions of the innumerable women I have trained with and work with, and the great accomplishments they have achieved. Actions speak so much louder than words."

According to Anderson-Worts, "The key to helping address gender bias in medicine is through role modeling, education, and exposure. As a female and

AMONG PRIMARY CARE PHYSICIANS, Who Earns More?



Source: Medscape Physician Compensation Report



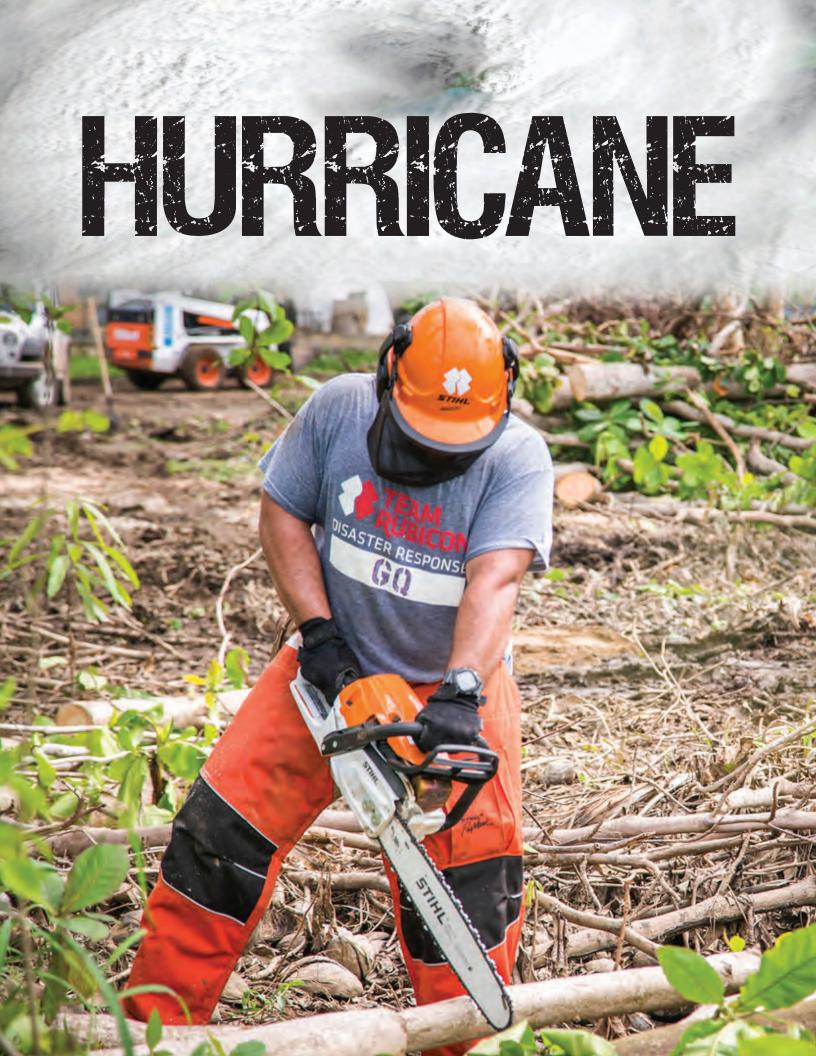
"The key to helping address gender bias in medicine is through role modeling, education, and exposure."

-Paula Anderson-Worts, D.O., M.P.H.

as a woman of color, discrimination is something I have encountered at various times during my medical career," she said. "I have used my moments of unfair treatment to be a catalyst for my commitment to academic medicine. Through leading by example, my goal is to educate and promote diversity, while helping to pave the way for future female physicians."

Pandya, who has been a practicing physician for a few decades, says her female peers need to initiate difficult conversations that put gender bias issues at the forefront. "I strongly believe open discussion and disclosure about general salary ranges and productivity are important," she stressed. "Women physicians need to form strong networks, seek female mentors, learn negotiation skills (and not accept the salaries they are first offered!), continue to enhance their skills, and sit on important committees that influence institutional functioning."

Lindley posits that shadow experiences may help male colleagues become more empathetic to the plight of female physicians. "Have them spend one day in my shoes or shadowing me," Lindley challenged.





Gabriel Quinones-Medina uses a chainsaw to assist with hurricane cleanup efforts.

GABRIEL QUINONES-MEDINA PROVIDES DISASTER RELIEF

BY SCOTT COLTON, B.A., APR

Armed with chainsaws, KPCOM student Gabriel Quinones-Medina, M.S., M.B.S.—a Team Rubicon regional chainsaw instructor and his squad were deployed to the Florida Panhandle a day after Hurricane Michael devastated the area on October 10, 2018. NSU administrators approved the effort, allowing Quinones-Medina to spend the next few days clearing main and secondary roads so emergency services and utility companies could navigate the debris-strewn streets.

Team Rubicon, established in 2010, is an international, nonprofit disaster response team that unites the skills and experiences of military veterans with first responders to rapidly deploy emergency response teams, free of charge, to communities affected by disasters.

Quinones-Medina, who also is pursuing a Master of Science in Disaster and Emergency Management from NSU-KPCOM, initially joined forces with Team Rubicon in the aftermath of Hurricane Maria in 2017, which decimated large swaths of Puerto Rico. "I learned about Team Rubicon from a close friend just after Hurricane Irma had swept through Puerto Rico and Florida. Then, Hurricane Maria devastated Puerto Rico, my home country," he explained.

"I was looking for opportunities to help my family and friends in Puerto Rico when I heard that Team Rubicon was planning a medical response trip to the island," added Quinones-Medina, who worked as an emergency room

HURRICANE HELP



Right: Gabriel Quinones-Medina provides chainsaw instruction to Team Rubicon volunteers.

Below: Cutting and clearing downed trees in the Florida Panhandle was a priority for Quinones-Medina.



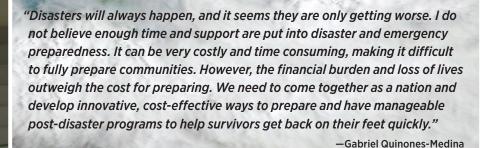
technician at Northwest Medical Center in Margate, Florida, for almost two years. "Thankfully, I had kept my emergency medical technician certification current, which gave me the opportunity to join Team Rubicon in September 2017."

Because Quinones-Medina was not yet a KPCOM student physician when he assisted with Hurricane Maria relief efforts in Puerto Rico, he was willingly deployed to the island three times, spending almost two months providing medical care and assisting with the cleanup efforts. When Hurricane Michael—a fierce Category 4 storm—blasted ashore in the Florida Panhandle, Quinones-Medina immediately took time from his KPCOM studies to lend a helping hand.

"It is hard to imagine what people are going through until you witness the devastation firsthand," said Quinones-Medina, who volunteered nearly 100 hours of direct lifesaving community service to affected areas. "Some people lost their homes and belongings, while others died because emergency services could not navigate the treacherous road conditions," he noted.

"Disasters seem to be getting worse," Quinones-Medina added. "We need to come together as a nation and develop innovative, cost-effective post-disaster programs to help survivors get back on their feet quickly."

Although Quinones-Medina said he was always interested in the emergency medicine field, he did not decide to focus on it as a career choice and pursue his M.S. in Disaster and Emergency Management until he was deployed to Puerto Rico. "I thrive in a fast-paced environment where critical decisions need to be made



Quinones-Medina checks the blood pressure of a Puerto Rico resident.

quickly. Working in an austere environment adds several layers of challenges, which makes the practice of medicine and saving lives more rewarding and exciting," he said.

"While I haven't served in the military yet, I am currently working on my application for the Health Professions Scholarship Program through the U.S. Navy," he added. "Military service was something I had long considered, and potentially being able to merge my passion for medicine and military service presents a unique career trajectory. Joining Team Rubicon allowed me to learn about military life, the challenges veterans face, and how I can become a major cog in the machine of making significant, positive changes in how our veterans are treated today and in the future."

Quinones-Medina's contributions in the Hurricane Michael relief efforts were acknowledged by Team Rubicon leadership, which sent a letter of appreciation to the KPCOM's assistant dean of student and alumni affairs. "I can honestly say that having him here saved lives. The valiant efforts of Gabriel provided assistance to communities, homeowners, and survivors affected by Hurricane Michael," said Aaron D. Marshall, incident commander, National Incident Management Team. "Without his assistance, Team Rubicon would not have been able to assist these individuals on their worst days, save lives, and alleviate suffering."

KPCOM students sign an appreciation poster to honor the Health Professions Division custodians.

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QUIET HEROES

KPCOM STUDENTS EXHIBIT APPRECIATION TO CUSTODIAL STAFF

BY SCOTT COLTON, B.A., APR

Dozens of dedicated custodians move with unobtrusive efficiency through NSU's Health Professions Division (HPD) each day as they empty trash bins, clean up spills, vacuum floors, and perform countless other tasks to keep the facility tidy and operational. To honor these "quiet heroes" who make the HPD study and work environment spotless, KPCOM students coordinated the inaugural Custodian Appreciation Day on October 30 in the Student Lounge.

The idea was the brainchild of second-year student Zachary Burns, who was involved in custodian advocacy when he was an undergraduate student at Wesleyan University in Middletown, Connecticut. Not surprisingly, when Burns presented the idea to his KPCOM peers, support was overwhelming.

"Establishing Custodian Appreciation Day at NSU was the least we could do," said Burns of the event, which was cohosted by the KPCOM's Student American Academy of Osteopathy (SAAO) and the Plant-Based Healthcare student organization. "It was a declara-



Because custodians' jobs are extremely strenuous, the students provided osteopathic manipulative treatment to alleviate their various muscular aches.

tion that, as medical students and future doctors, we are not—and never will be—too busy or too important to thank the support staff who make our work possible."

To ensure the event's success, 21 KPCOM student clubs collaborated to create a useful and interactive agenda for the participants. For example, the SAAO members and the osteopathic principles and practice fellows set





The students enjoyed getting to know the custodial workers who keep the Health Professions Division operational.

up five osteopathic manipulation tables for soft-tissue massage, while the Ophthalmology Club performed vision testing.

"Sigma Sigma Phi wrote personalized thank-you cards to more than 40 custodians, while the Photography Club documented the festivities," Burns said. "Hispanic Osteopathic Medical Student Association members were on call as translators. Additionally, the Emergency Medicine Club and the Dermatology Club gave away instant icepacks and sunscreen, while several clubs brought homemade dishes and desserts."

Some clubs even stepped up monetarily by providing funds to purchase six substantial gift cards to Delicious Raw, a nearby vegan restaurant. "The whole scene, replete with thank-you decorations and reggaeton music, was very moving," Burns said. "The Student Lounge had never seen so much love."

Because proper nutrition is such a crucial tool in enhancing a person's overall health, providing nutritious food to the custodial staff was a goal for Burns, who helped create the KPCOM's Plant-Based Healthcare club in 2017. "We founded the club to educate classmates about the power of plant-based eating to prevent and reverse chronic illnesses like diabetes and cardiovascular disease," Burns explained.

During the students' interactions with the appreciative custodians, one worker remarked in Spanish, "I've worked here for 15 years, and this is the first time anyone has done something like this for us."

Burns shared that one custodian who suffered from chronic back pain was referred to the nearby osteopathic tables, where a first-year student was able to practice soft-tissue techniques to relax her muscles. She was also given information about the college's Osteopathic Manipulative Medicine Clinic.

Another worker, who was overweight, raved about the plant-based meal he had just enjoyed and said, "Imagine if we ate like this all the time." Burns then had a conversation with the custodian about barriers to healthy eating and provided concrete strategies for overcoming them. "He left the event after receiving a big hug—and with a cup of raw vegetables," Burns remarked. \Box



It was a day filled with gratitude and camaraderie for the students and custodians.

"I AM VERY GRATEFUL FOR THE APPRECIATION. THANK YOU!"

-GUSTAVO RODRIGUEZ

"IT WAS AN AMAZING EXPERIENCE, BUT MOST IMPORTANT WAS THE COMPASSION DEMONSTRATED BY THE STUDENTS." -MORTA ELENA HERNANDEZ "I GOT A MASSAGE FROM THE KPCOM MEDICAL STUDENTS AND WALKED OUT FEELING BRAND NEW. THANK YOU!"

-YOLANDA HERRERA

"I AM VERY GRATEFUL. THEY MADE US ALL FEEL VERY GOOD. THANK GOD FOR THE KPCOM MEDICAL STUDENTS."

-CARMEN ESPINAL

"MY SINCEREST GRATITUDE TO THE OSTEOPATHIC MEDICAL STUDENTS. THIS SHOWS THE GREATNESS OF THEIR PROFESSIONALISM TOWARD OTHERS."

-ENRIQUE ASCANIO

"I LOVE HOW WELCOMING THE KPCOM STUDENTS WERE AND HOW AMAZING THEIR MASSAGES WERE." -MARIA TERESA HERNANDEZ

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CHILDHOOD CHALLENGES FOSTER RESILIENCY AND EXCELLENCE IN RESEARCH

BY SCOTT COLTON, B.A., APR

As a Jewish child growing up in the Soviet Union in a small town near Volgograd (formerly Stalingrad), Lubov Nathanson, Ph.D., M.S., and her younger sister, Nataly, were raised to appreciate the importance of a good education. "Because I was the older sister and the first child, I was a subject for all their pedagogical experiments," said Nathanson, whose parents taught her to read and do basic arithmetic by the time she was five.

Although Nathanson had a loving and happy childhood, the specter of anti-Semitism loomed large. "Our family was lucky, and we had very good personal relationships with many people, including our neighbors, colleagues, and classmates," she explained. "However, unspoken anti-Semitism was prevalent in the Soviet Union, so my parents' mantra was, 'Remember that you are Jewish. You have to be the best in every discipline in order to be accepted to a good university.' "

It is a lesson Nathanson never forgot. At that time, children in the Soviet Union began school at age seven. Thankfully, her parents' emphasis on early learning experiences resulted in Nathanson receiving stellar grades from the onset of her formal schooling. "When I started receiving excellent grades, where the highest grade was five on a scale of one to five, my parents' reaction was, 'This is how it has to be.' When I received all fives, it was just normal. But if I earned a four, it was terrible."

In addition to developing a passion for learning, Nathanson honed her nurturing skills by serving in a quasi-parental role for her sister, who was more than seven years younger. "She always referred to me as one of her parents. After school, I picked her up from day care, and she was under my supervision until our parents came home from work," she explained.

Like many children, Nathanson's career ambitions pivoted wildly until she finally settled on her true calling—biology. "In elementary school, I wanted to "In elementary school, I wanted to be both an animal doctor and an actress, but in middle school, I decided I was going to be an English teacher. Toward the end of middle school, however, I won the regional competition in biology, which led me to realize my fate was to study biology at Moscow State University."

-Lubov Nathanson, Ph.D., M.S.

be both an animal doctor and an actress, but in middle school, I decided I was going to be an English teacher," she recalled. "Toward the end of middle school, however, I won the regional competition in biology, which led me to realize my fate was to study biology at Moscow State University. At that time, it was the most prestigious biology school in the Soviet Union."

After earning her Master of Science in Biology/ Biophysics from Moscow State University, Nathanson pursued a Ph.D. in biology from Volgograd State Medical University. "Scientific provision in Volgograd was very different than in Moscow, and we literally did not have reagents (a substance or mixture for use in chemical analysis or other reactions) and working equipment," said Nathanson, who completed her thesis but never defended it.

Nathanson said the experience provided her with some vital survival skills. "I learned to endure long, intensive working days, solder, construct electrodes and instruments, recover silver from the waste of the photo lab, purify sucrose from sugar from the food store, and obtain reagents from my former Moscow classmates."

Her newly acquired skills would serve her well in the coming months and years as she embarked



Clockwise from right: Lubov Nathanson strikes a pose at age four; she celebrates her son Yonathan's (right) bar mitzvah, along with her older son, David (left); Nathanson (right) poses with her sister, Nataly.



on a personal and professional journey that led her away from the Soviet Union and toward ultimate vocational satisfaction.

OPPORTUNITIES ABOUND IN FOREIGN LANDS

As she neared the end of her Ph.D. studies at Volgograd, Nathanson had undergone a personal transition and was now married and pregnant. Seeking a better life in a place free of anti-Semitism, Nathanson and her husband decided to emigrate to Israel.

The relocation to Israel, however, came at a steep price. "According to Soviet law, we had to give up our Soviet citizenship and pay a fee to leave. Additionally, we could take only \$150 per person with us."

Thankfully, Israel turned out to be a welcoming country to Nathanson, who was seven months pregnant and pursuing new educational and career prospects. The biggest hurdle she needed to overcome was finding a job in a country where Hebrew was the prevailing language. Fortunately, the non-Hebrew-speaking Nathanson was able to land a job at the Feinberg Graduate School Weizmann Institute of Science in Rehovot, where she earned her Ph.D. in Molecular Biology and Biochemistry.

"I learned both English and Hebrew when I started working at the Weizmann Institute. The first three months were like being in a fog, but then I realized I suddenly understood what people around me were talking about," she said. "I learned a lot professionally during my time at the Weizmann Institute. We worked at the cutting-edge level, and it was an honor to learn from the world-class scientists."



After earning her Ph.D., Nathanson relocated to South Florida in 1997 to accept a postdoctoral position at the University of Miami (UM) Miller School of Medicine, where she began honing her expertise in cellular processes. What followed was a productive 12-year stint as a UM researcher, where Nathanson served in a range of roles, including director of the Gene Expression and Microarray Core for UM's John P. Hussman Institute for Human Genomics.

It was an exciting time for Nathanson, who gained extensive hands-on experience in the intricate science of sample processing for microarray, NanoString, nextgeneration sequencing analyses, and the study of large genomics datasets and system biology analysis. Her multifaceted UM endeavors would eventually lead to her immersion in groundbreaking research related to myalgic encephalomyelitis/chronic fatigue syndrome (ME/CFS) and Gulf War illness (GWI).

"I was initially exposed to the conditions of ME/ CFS and GWI about 10 years ago when UM researchers Nancy Klimas, M.D., and Mary Ann Fletcher, Ph.D., M.A., decided to run microarrays in our Gene Expression and Microarray Core to investigate Left: Lubov Nathanson (standing) assists Leonor Sarria, B.S., research assistant II, with a grant-funded project.



differences in gene expression in ME/CFS and GWI patients compared to healthy controls," she explained. "It was the first time I heard about these diseases, and I became quite interested in this type of research because of that initial exposure."

While the disease names were new to her, the war that caused GWI was not. "I was living in Israel in January 1991 during the Gulf War. I remember sirens, Scuds, and sitting in a sealed room at night, watching the news," she recalled. "We had gas masks and had to put them on each time the Scud alarms went off."

REVOLUTIONARY RESEARCH LEADS TO NSU

When Klimas left the University of Miami to lead the new NSU Institute for Neuro-Immune Medicine (INIM) at the Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM), she offered Nathanson an opportunity to join her.

"At UM, I had a technical position, performing analyses for other investigators' projects. My faculty position at NSU allows me to apply for funding and lead my own projects," said Nathanson, who has secured a number of federal grants during her KPCOM tenure. "My responsibilities include researching causes and mechanisms of ME/CFS and GWI and providing support in the genetics assays and data analysis."

Because the NSU INIM is a large and innovative entity, Nathanson has the freedom to focus on the ME/ CFS and GWI research she finds most compelling. "I am very fortunate to be part of the INIM team," she admitted. "I would not be able to achieve anything without the support and resources of our team. I also value the support of Dr. Nancy Klimas, who sometimes allows me to do crazy things. A huge INIM asset is our administrative, clinical, computational biology, and lab teams, which are interconnected." Today, Nathanson is an assistant professor of clinical immunology in the NSU Institute for Neuro-Immune Medicine, a path that combines the passions and talents of her father, a successful mechanical engineer, and her mother, a chemical engineer.

Since becoming an NSU faculty member, Nathanson has received two sizable grants from the National Institutes of Health, as well as two from the Congressionally Directed Medical Research Program/Department of

Defense Gulf War Illness Research Program. She also secured two smaller grants from private sponsors.

"I hope to understand the underlying mechanisms of these mysterious diseases," said Nathanson, who also serves as an adjunct professor in the KPCOM's Master of Science in Nutrition program and in the NSU Halmos College of Natural Sciences and Oceanography. "DNA (deoxyribonucleic acid) has all the information about the processes and activities in our cells. RNA (ribonucleic acid) is the main messenger of this information and is the main regulator in our cells. I hope genomics research on the levels of DNA and RNA will help to understand the triggers and ways to cure ME/CFS and GWI," she said.

"There are relatively few scientists working to solve the mysteries of these diseases," Nathanson added. "Our lab in the NSU Center for Collaborative Research is located next to the INIM clinic, so we see the patients who come in for assessment and treatment. Seeing these patients motivates us to find the causes of ME/CFS and GWI and design the cure."

In addition to being fulfilled professionally, Nathanson is extremely content in her personal life. Although she and her husband eventually divorced, the marriage produced two wonderful sons, David and Yonathan. She also found love again with her boyfriend of more than 12 years, Eugene.

As she looks to the future, Nathanson foresees a long and rewarding affiliation with the NSU Institute for Neuro-Immune Medicine. "I would love to continue doing what I am doing, but with the addition of enough funds to have my own group of graduate students, postdoctoral scholars, and technicians—and enough funds to do crazy scientific experiments," she said laughing. \Box

INSIDE

MEDICAL OUTREACH TRIP OFFERS INTRIGUE

BY JOSHUA BERKO

Located in the Dang District of the state of Gujarat, 8,700 miles from NSU's Fort Lauderdale/Davie Campus, 44 students and 9 preceptors traveled 32 hours to learn, teach, and serve 1,005 patients in a makeshift clinic in the rural village of Ahwa, India, in December. Temporary accommodations were assembled to create a fully functioning clinic on the construction site of a future hospital spearheaded by KPCOM namesake Dr. Kiran C. Patel, M.D.

During their time in India, Ashok Patel, M.D., ensured that students had the opportunity to learn



from preceptors and practice in the fields of dental medicine, pharmacy, optometry, psychology, pediatrics, general medicine, osteopathic manipulative medicine (OMM), and surgery.

The cases seen by the medical team ran the gamut from gangrene and leprosy to joint pain and diabetes. "India was unlike anything I had ever seen before. It was a great experience because there were so many challenges that really brought our team closer together," said seasoned traveler and first-year student Brittany Kennedy. "It was an endeavor traveling the distance, adjusting to the environment, allocating resources, and communicating in a foreign language before we even began treating patients."

As patient care began and the days progressed, Kennedy became very aware of the true determination of the patients coming to the clinic. "All the individuals who came through were extremely patient, grateful, and willing to walk 15 or 20 miles with their kids and families just to be seen for 15 minutes. I was also shocked by their culture of appreciation," she explained.

"Mothers, fathers, and children dressed up in their nicest clothes to come see us and always took off their shoes before entering the clinic," she added. "The region of Gujarat we served struck me as extremely rural, with beautiful people who needed improved health care. It was exciting to be able to provide that to them."

Kennedy noted that language was a major barrier to providing health care in the region. India is a country with more than 454 living languages, and it came to the immediate



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"Giving bad news is tough no matter what language it's in. However, I think being able to speak their native language helped build their trust in us. They seemed to find a sense of comfort in being understood."

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-Aakash Trivedi, second-year student

India

Clockwise from right: First-year student Joshua Berko provides osteopathic manipulative treatment to a patient; class of 2022 student Taylor Smith (left) administers osteopathic manipulative medicine treatment to a patient, while B.S.P.H. student Misha Brahmbhatt translates for both Smith and the patient; class of 2022 student Marisa Mastropasqua performs a dental exam in the busy clinic.



attention of the team that more than one translator was often necessary to facilitate a smooth delivery of care. Second-year student Aakash Trivedi boldly stepped into the dual responsibility of being both a care provider and a translator.

Trivedi not only speaks English and Hindi, but also the local dialect Guajarati. This multifaceted responsibility led him to play a crucial role in assisting in an emergency case where a 10-year-old boy had to have his foot amputated because of a motorcycle injury that turned septic. "Giving bad news is tough no matter what language it's in. However, I think being able to speak their native language helped build their trust in us," he said. "They seemed to find a sense of comfort in being understood."

Having patients feel comfortable and understood by their physicians is paramount in a humanistic perspective of patient treatment. First-year student Isabella Dreyfuss felt privileged to witness the true definition of a humanistic approach to medicine throughout this trip.

"I'll never forget the patient who presented with a lion-like facial appearance, which I quickly learned





was leprosy. The physician I was working with at the time showed courage and selflessness by providing hands-on care despite leprosy being a highly contagious disease," Dreyfuss said.

"I also recall one of our OMM patients—a woman suffering with severe pelvic somatic dysfunctions from working as a housekeeper and fieldworker her entire life," she added. "Opportunities like these made it so hard to leave in the end. I believe we made an extremely positive impact, because we solved many people's issues, even if they were minute. In health care-deprived areas like these, even a common cold can escalate quickly into something much worse."

Joshua Berko is a first-year KPCOM student.

AN UNEXPECTED ENCOUNTER WITH AMPUTATION

BY AAKASH TRIVEDI

Day two. Patients are everywhere, and the waiting area is becoming more crowded by the second. Suddenly, a pathway opens as a young man runs in carrying a child in his arms.

As they enter a patient room, I see a mass of student doctors, physicians, and other patients gather around. I quickly enter the room to see if I can be of any use, whether it be translating for the family or making sure they had privacy. Little did I know this would end up being the greatest and most intense medical experience of my life.

Gangrene. Necrosis. Sepsis. As I try to translate these words to the family members, I see worry creep into their eyes. To my surprise, however, the 10-year-old boy, Sunil, does not make a sound. He is respectful, compliant, and easily the best patient I had seen within the last two days, taking his pills and medications without a fuss.

As I heard the story of how a motorcycle ran over his foot 13 days ago, and that the local hospital refused to do surgery, I quickly realized that in order to save this boy's life, the foot would have to be amputated. Over the next hour, while I comforted Sunil and his family, arrangements were made to take him to the nearest equipped hospital for surgery. When it was time to go, the patient, his family, two physicians, and I were chosen to go to Bardoli Hospital.

Two hours pass. As the team preps for surgery—a mid-tibia amputation—the surgeon asks me if I want to scrub in for the procedure. Without hesitation, and without knowing the magnitude of the question, I immediately say yes.

With my eyes fixated on the surgeon, I watch as the first incision is made—muscles, blood vessels, and nerves all exposed. Halfway through the cauterization, the surgeon hands me the cautery and says, "Finish up." Here I am, a second-year medical student, being trusted to partake in a life-saving surgery.

The surgeon guides me as I cauterize blood vessels and cut through muscle fibers. Now the tibia. Someone hands me the handsaw, and the task becomes natural. Within 30 seconds, Sunil's bone is cut in half. The



From left: The attending orthopedic surgeon at the hospital in India; Niralis Patel, M.D.; Daniel Olsen, D.O.; and Aakash Trivedi

physicians then step back in to finish the surgery, which is a success.

As Sunil is rolled back to his room, the family touch my feet—a sign of respect to elders. I quickly stop them, and being the youngest one there, touch their feet instead.

The ride back to Ahwa offers time to reflect. Through the entire experience, Sunil never fussed. The only thing he asked for was his brother. It dawned on me that these patients take everything that happens in their lives in stride. That is why helping this child was so important. Without us, he would have died within a week.

This patient gave me my first surgical opportunity and my first true hands-on experience in medicine. Sunil also gave me a realistic perspective of the profession. As educated students and physicians, we have a responsibility to help people in need. \Box

Aakash Trivedi is a second-year KPCOM student.

STUDENT Perspective



How to Transition to a Plant-Based Diet

BY JONATHON FOX

While the benefits of a plant-based diet are becoming increasingly apparent, there seems to be a crucial piece of the conversation missing. In fact, it is probably the most important part: What exactly does plantbased even mean? In addition, what are the ways not only to make the transition possible, but also enjoyable?

The KPCOM student group Plant-Based Healthcare has been engaging classmates in nutritional education since its inception in May 2018. The student body has learned the "why" and now wants to know the "how" of plant-based eating.

I would like to clarify that plant-based eating does

not necessarily mean being vegan. Plantbased eaters subsist primarily on plants, but might eat some animal foods. Whether you are in it for your health,

Plant-based eating can be both appetizing and rewarding.

protein-dense substitutes for animal products. If you have little experience cooking, or even eating, tofu, there are several ways to transform the squishy block of soy into the star of the show. First, select the right tofu for the

animal welfare, environmental protection, or global hunger alleviation, every herbivorous meal counts.

I have been there. Most people envision themselves staring blankly at a bland bowl of rice and beans day in and day out when they contemplate a plant-based diet. After dealing with my own frustration with too many bland meals, I started experimenting in the kitchen. I want to share how plant-based eating can be both appetizing and rewarding.

My first tip is to transition slowly. Adopting a plant-based diet can be intimidating at first, but it becomes easier with time. Wanting the best for your body and choosing to reduce animal foods in your diet dish; different types serve different purposes.

is already an accomplishment. The literature abounds

with data that the intrinsic saturated fat, cholesterol,

hormones, and antibiotics in meat, dairy, and eggs

should be consumed in careful moderation, if that.

A common concern people have is how to get

enough protein without consuming animal products.

This is readily possible if you enjoy beans and legumes,

but protein is also found in cruciferous vegetables like

Products like tofu, seitan, and tempeh serve as hearty,

kale, broccoli, cauliflower, and cabbage, as well as in

whole grains like barley and oats.

Silken tofu is extremely soft and can make an excellent addition to a breakfast smoothie or soup. If you want a thicker, meatier option, press extra-firm tofu slices between two clean kitchen rags and place a heavy pot on top. Letting the tofu sit this way for at least 30 minutes will allow it to soak up any marinade. Bake it at 425 degrees for about 15 minutes, flipping halfway through, and I guarantee your tofu will be flavorful. Slice and serve these beauties in a salad or with rice and vegetables for the ultimate craving crusher.

Determining how to make a quick, healthy meal is a challenge everyone can relate to—especially medical



Plant-Based Healthcare members pose with Fort Lauderdale Food Not Bombs representatives after serving homemade vegan food to homeless men and women.

students. Meal prepping is a practical solution for anyone with a busy schedule looking to consolidate time in the kitchen. Investing a few hours one day a week in meal prepping makes clean eating much more manageable and consistent, which is key in adopting a plant-based diet.

I like to prepare a week's worth of salads alongside my cooked entrées. Making an easy salad dressing ensures the salads taste great, while avoiding the hidden sugars and excessive oils found in many storebought brands.

Having an array of chopped vegetables on hand makes it easy to add variety to your meals throughout the week. Stewed lentils and quinoa become even more satisfying with a handful of chopped kale, tomatoes, red peppers, and parsley.

Sometimes, when I am pressed for time, a rewarding default is to roast almost any vegetable I have on hand. Toss the caramelized gems atop quinoa or rice, along with chickpeas sautéed in a tomato and oregano sauce, and you have a satisfying, nutritious, and inexpensive meal.

Of course, it is all about the toppings. A simple way to take your plant-based meals to the next level is by adding various seeds. Ground flax seeds—which have a nutty taste similar to graham crackers—and chia seeds are filled with protein, fiber, and healthy fats, making them great additions to any smoothie. Hemp seeds, which contain the optimal ratio of omega fatty acids, are a nice option for salads and savory dishes.

I have gained a new perspective by adopting a plantbased lifestyle. In losing excess weight and experiencing boosts in energy and cognition, I realized how detrimental a meat-based diet had been. After just a few months, my body made huge adjustments.

For example, eliminating animal foods has truly made the taste of fruits and vegetables better. What was once only an apple is now an abundantly sweet midday snack to power me through studying, while cucumbers, which I once found as flavorful as a glass of water, now have become a welcome snack with subtle complexity.

I initially felt restricted in what I could eat, but have since discovered an array of foods I may never have appreciated. I have always loved cooking, but going plant-based actually sharpened my culinary skills and creativity. Food has become more than just fuel to get me through the day. It has become an active investment in being the healthiest, happiest version of myself.

continued on page 28

STUDENT Perspective



continued from page 27

Start the morning with **overnight oats** topped with sliced bananas and strawberries, homemade chocolate hazelnut butter, and ground flax seeds (*below left*).

A deconstructed **SUShi bowl** topped with chopped vegetables and sesame and hemp seeds makes for a hearty meal (*below right*).

Jonathon Fox's favorite is homemade sweet potato and black bean **enchiladas** with pico de gallo and roasted vegetables (*opposite page, bottom left*).

Vegan **macaroni and cheese** with seared broccoli serves as a healthy comfort food. The rich and creamy sauce was made from boiled carrots, onions, potatoes, nutritional yeast, and cashews (opposite page, top).

Cap off your meal with a decadent, guilt-free dessert of vegan **Cheesecake** topped with a homemade berry and chia seed jam (opposite page, bottom right).

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Mary Scanlon

Life Experiences Instill Compassionate Approach to Patient Care

BY SCOTT COLTON, B.A., APR

Mary Nocero Scanlon, D.O., grew up near Orlando in Altamonte Springs, Florida, and knew from an early age that a career in medicine was her vocational destiny. You might even say it is in her blood, since her father is still a practicing physician in Orlando, while her grandfather on her dad's side was a family practice physician in New York who made house calls.

"My father is a renowned cardiologist, and whenever I met his colleagues, they would always ask if I was going to follow in my dad's footsteps," explained the 2000 KPCOM alumna, who said a family tragedy nudged her closer to becoming a physician. "I remem-

ber being called home one day because my grandfather on my mom's side was very ill. My dad took care of him at the hospital, but he died from a blood clot. I

was young at the time, but I was deeply affected by the situation and wanted my dad to find a way to save him."

It was during her elementary school biology class that Scanlon's budding interest in medicine deepened. "I loved my science classes and my wonderful female grade school teachers, who taught me that women could do anything in this world, including in the medical field," said Scanlon, who also credits her parents for lovingly nurturing her and her two younger sisters.

"My dad always told us we could do anything we wanted in life," said Scanlon of her father's prophetic words. While she went on to become a physician, her sisters pursued a different professional path and became lawyers.

Thanks to her supportive home and school environs, Scanlon was emboldened to adopt a sky's-the-limit approach to life and medicine. "I shadowed my dad at his office and saw how his relationships with his patients were more than just making sure their hearts were working well. It was about taking care of the whole person," she explained.

A Detour Into Teaching

After earning her Bachelor of Science in Biology from Villanova University in Pennsylvania, Scanlon made a few interesting detours on her way to attending medical school. "I decided I wanted to do some research, so I went to Boston College for my master's in biology," said Scanlon, who also enjoyed working

as a teaching assistant during this time.

Because Scanlon found the teaching experience so gratifying, she put her medical school plans on hold

"Through thick or thin, one day at a time, I will always be there for my patients, as well as my friends and family."

-Mary Scanlon, D.O.

again to earn a Master of Education from Boston College and spend two fulfilling years as a biology teacher at Lexington High School in Massachusetts. Although she loved teaching, Scanlon said she never lost sight of her original plan.

"I knew I wanted to return to Florida and attend medical school, so I applied to Nova Southeastern University because I liked the D.O. approach," said Scanlon, who began her studies at the Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) in the summer of 1996. It was during her third- and fourth-year clinical rotations, however, when her affinity for family medicine came into focus.

"I was able to do my rotations at Wellington Regional Medical Center in Wellington, Florida, which is where I met Drs. David Simon, Joanna Widdows, and Eddie Velasquez. I loved how they took care of their patients with a combination of care and



Mary Scanlon (left) discusses a case with Malia Maya, M.A., LMT.

ALUMNI Spotlight



Tim and Mary Scanlon enjoy a trip to Lake Louise in Alberta, Canada.

compassion," she explained. "That's when I knew I wanted to specialize in family practice."

After graduating from the KPCOM in 2000, Scanlon completed both her internship and family practice residency at Wellington Regional Medical

Center. She had also met Tim Scanlon, to whom she has been married for 23 years. They have two sons, Patrick, 17, and Ryan, 15.

Speaking from Experience

In her current role as a private practice physician, Scanlon's motto is, "If you are not an advocate for your patient, no one will be." It is a vital life lesson Scanlon learned following the birth of her son, Ryan, while she was in the third year of her residency training.

"Two months after Ryan was born, he started experiencing infantile spasms—a rare form of seizures. At the time, we did not know what he was going through, but after multiple testing was done at Jackson Memorial Hospital in Miami, we discovered he'd had an in-utero stroke," she explained. Scanlon completed her residency and began working at Palm Beach Medical Associates in Lake Worth during her son's recovery. During the next few years, however, much of her time and energy went into taking Ryan to hippotherapy—the use of equine movement as a therapy tool—as well as neurology, occupational therapy, physical therapy, and speech therapy sessions.

"I quickly learned that if I wasn't proactive when it came to my child's health, no one else would be, either," she explained. "I was never someone who spoke up in college or during medical school, but now I had no choice. With my husband's help, we became Ryan's advocates and got him the help he needed to be successful in the future."

Fortunately, Ryan's story has a happy ending. "After a year of being on medication, his seizures resolved, and he began talking and improving physically. He is now in ninth grade, and while he has right-side weakness, he excels in football, baseball, and basketball," Scanlon said. "He loves school and is a role model to many of his teachers, friends, and family members."



The staff at Scanlon's practice includes Malia Maya, M.A., LMT; Antionette McCoy; Sheana Stroempl; Carol Wardally; Scanlon; Lilliam Rodriguez, M.A.; Trish Sampson, M.A.; and Kim Porter, M.A. Not pictured are Ramona Melicam, M.A.; Sarah Garcia, M.A.; and Jane Shore, office manager.



After spending four years as a family practice associate, Scanlon made the bold move to open her own busy practice in December 2008. "I really love my job," she admitted. "I have patients who have been with me for 15 years. I love connecting with them both medically and personally. They come from different paths and have different stories to tell, but they truly become part of my family. As their physician, it's my job to be their advocate."

Exudes Exceptional Qualities

Janet L. Roseman-Halsband, Ph.D., M.S., R-DMT, assistant professor of integrative medicine at the KPCOM, attests to the humanistic qualities that make Scanlon so exceptional. "Dr. Scanlon is the consummate physician and human being," Roseman-Halsband said. "She has been my health provider for a decade and offers kindness, clinical excellence, and positive energy. I feel fortunate to have found her."

Scanlon's professional fulfillment is enhanced by the close relationships she has with her associates, "especially my female specialists, who know how hard it is to be both a doctor and a mom," said Scanlon, who plans to continue her family practice career for many years. Scanlon, who watched her mother courageously battle metastatic breast cancer for five years before succumbing to the disease, credits her faith in God and her tight-knit family for making her the person she is today. "My sons have strengthened me to support those who need advocates, while my dad has been the medical guru who has guided me throughout the entire medical process," she said. "My mom was my emotional strength when times were tough, and my husband, who also works in the medical field, has been there to take care of the family, and me, when I was unable to do so."

During the past two years, Scanlon has been serving as a mentor to Lake Erie College of Osteopathic Medicine students, as well as Barry University physician assistants, which is a role she finds most rewarding. "I want to instill in them the need for compassion and love for their patients, as I find these are traits that are sometimes overlooked," she explained.

"If your patients trust you and know you are looking out for their best interests, it ultimately makes it easier to diagnose their ailments," she concluded. "Through thick or thin, one day at a time, I will always be there for my patients, as well as my friends and family." \Box

Alumni in the News

Anthony Abraham, D.O. ('09), joined the Medical Center of South Arkansas in El Dorado as a practicing surgeon. Abraham, who completed his residency training at Larkin Community Hospital in South Miami, Florida, is a member of the American College of Osteopathic Surgeons, the American College of Surgeons, the American Osteopathic Association, the Arkansas Medical Society, and the Arkansas Osteopathic Medical Association.

Alireza Daneshpajouh, D.O. ('14), a general surgery resident at Larkin Community Hospital in South Miami, Florida, earned first-place honors in the Robert C. Erwin Literary Competition for his submission "Increase in Neutrophil to Lymphocyte Ratio Is Associated with Evolution of Hemorrhage After Traumatic Brain Injury." He also received fourth-place honors for his submission "Operative Outcomes After Sternal Reduction: A Single Center's Experience." The competition was held during the American College of Surgeons Clinical Congress held October 21–25 in Boston, Massachusetts.

Tyeese Gaines, D.O., M.B.A. ('06), is the new chief executive officer and medical director of NOWmed Walk-In Urgent Care in her hometown of Jersey City, New Jersey. She also is the owner and lead media strategist for Doctor Ty Media, LLC.

Wayne Hachey, D.O., M.P.H. (89), is the medical director at Sanofi Pasteur located in Swiftwater, Pennsylvania.

Joshua D. Lenchus, D.O., R.Ph., FACP, SFHM ('00), is the new chief medical officer of Broward Health Medical Center in Fort Lauderdale, Florida. In this role, Lenchus will work with the medical staff to provide patients of the 716-bed, acute-care hospital with the highest quality of care and act as medical liaison between physicians and Broward Health leadership and administration. Lenchus, who is board certified in internal medicine, previously spent six years as chief of staff at Jackson Memorial Hospital in Miami, Florida. Amanda Manceau, D.O., FACOG ('12), joined the practice team at Advanced Women's Health of Nashville in Tennessee, which specializes in prenatal/ perinatal care, gynecologic care of all ages, and minimally invasive surgical procedures. Manceau, a fellow of the American Board of Obstetrics and Gynecology, completed her residency training at the University of Texas at Austin Dell Medical School.

Scott Moradian, D.O. ('13), a general surgery resident at Larkin Community Hospital in South Miami, Florida, received the Resident Achievement Award at the American College of Surgeons Clinical Congress held October 21–25 in Boston, Massachusetts.

Warren S. Nishimoto, D.O. ('91), was inducted as a member of the international Brotherhood of the Knights of the Vine.

Frank J. Paiano, D.O., FACOI ('01), is the new core site medical director for the Medical Student Clerkship Program at Central Florida Health for the Alabama College of Osteopathic Medicine. Additionally, Paiano is the new chief of internal medicine at Leesburg Regional Medical Center in Leesburg, Florida.

Joel L. Rush, D.O., FAOAO ('85), received the Morton J. Morris, D.O., J.D., Award for Osteopathic Orthopedic Education at the American Osteopathic Academy of Orthopedics (AOAO) Annual Meeting held October 18–20 in Atlanta, Georgia. He was recognized for helping to establish the orthopedic residency program at Parkway Regional Medical Center in North Miami Beach, Florida, now located at Broward Health. The award is presented annually to a member of the profession who has made an outstanding contribution related to osteopathic orthopedic education.

Toller Wilson, D.O. ('12), joined Brattleboro Memorial Hospital in Vermont as an internal medicine physician. Wilson, who completed his internal medicine residency training at the University of Connecticut School of Medicine, has a passion for wellness and disease prevention.













James R. Ingram, D.O., AOAO immediate past president (left), and Joel L. Rush

ALUMNI Corner



From left: Alan B. Levan, NSU Board of Trustees chair; George L. Hanbury II; Randy S. Katz; Elaine M. Wallace, D.O., M.S.⁴, KPCOM dean; and Jennifer O'Flannery Anderson, Ph.D., NSU vice president for advancement and community relations

Randy S. Katz

Graduate Honored with Distinguished Alumni Achievement Award

Randy S. Katz, D.O., FACEP, a 1999 Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) alumnus, received an NSU Distinguished Alumni Achievement Award at a ceremony held November 7 at NSU's Alvin Sherman Library Cotilla Gallery in Davie, Florida.

The annual event salutes outstanding graduates from each NSU college who demonstrate a record of distinguished service and extraordinary achievement in a particular profession, discipline, organization, or community cause. The award is the highest and most prestigious honor NSU bestows upon its alumni.

"There are many ways to determine the value of a university," said George L. Hanbury II, Ph.D., NSU president and CEO. "I believe that one of the most important ways is by what our graduates bring to the communities across the country and around the world after graduation. These honorees make NSU proud!"

Katz, who serves as chair of emergency medicine at Memorial Regional Hospital in Hollywood, Florida, and as medical director for the City of Hollywood Fire Rescue and Beach Safety, is a fellow of the American College of Emergency Physicians and an active member of the emergency medical services community. He also served as an adjunct professor for multiple institutions, including the KPCOM and Florida Atlantic University's Charles E. Schmidt College of Medicine.

Throughout his 15-year career as a Broward County emergency medicine professional, Katz has been instrumental in improving the delivery of cardiac arrest care, stroke care, and disaster preparedness in South Florida. He also serves in a leadership role on the Broward County Trauma Quality Improvement Committee, the Memorial Regional Hospital Medical Executive Committee, the Broward Stroke Council, the Florida Association of EMS Medical Directors, and the American College of Emergency Medicine EMS Subcommittee.

In addition to his professional accomplishments, Katz has played an active role in the community. For the past three years, he has served on the board of The 3G Project—a charitable organization dedicated to providing a lifeline to teenagers in the foster care system in Broward and Miami-Dade counties. □

RESEARCH News

\$8.5-Million Grant for Gulf War Illness Research

Gulf War illness (GWI) research at NSU's Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) reached an all-time funding high in 2018 when the U.S. Department of Defense (DoD) awarded an \$8.5-million grant to a KPCOM research team to establish a national consortium. The Gulf War Illness Clinical Trials and Interventions Consortium will serve as a mechanism for clinical trials based on several years of research and clinical expertise, furthering the understanding and treatment of GWI.

This funding follows a similarly focused grant awarded to the KPCOM team in 2013 that helped initiate a major study on the condition. Principal investigator Nancy Klimas, M.D., director of NSU's Institute for Neuro-Immune Medicine (INIM) and KPCOM assistant dean of research, is one of the foremost GWI researchers in the United States.

"We've established that Gulf War illness is caused by a disruption in normal cell signaling that results in these disabling symptoms," Klimas explained. "This is primarily due to disruptions in normal immune, cardiovascular, and hormone signaling." During the past four years, Klimas and her research team—as well as the other research team through its respective, previously funded GWI consortia—have identified disease markers that include, but are not limited to, energy production, immune function, and inflammation.

"Our research results to date suggest that treatment will rely on combination approaches that have synergistic effects and/or single drugs with multiple mechanisms of action," Klimas said. "In addition, due to the numerous symptoms tied to GWI that vary among patients, treatments may be effective only for particular subsets of patients, which is why our clinical trials focus on similar targets of disease activity from different, well thought-out, and validated approaches."

Klimas hopes to quickly deliver treatments to patients suffering from the debilitating illness. "Based on our early experiences with combination synergistic approaches, as well as single drugs with multiple mechanisms of action, we truly believe the targets in this proposal will help to improve energy production, restore immune function, and reduce inflammation," she added.



GULF WAR ILLNESS (GWI)

Cause:	Chemical weapons used in the 1991 Gulf War
Impact:	Nearly 700,000 soldiers, plus civilians
Symptoms:	Fatigue, headaches, stomach issues, memory loss, reasoning deficiency, muscle pain, respiratory problems, skin conditions

SOURCE: U.S. Department of Veterans Affairs' Research Advisory Committee on Gulf War Veterans' Illnesses

NSU GWI INVESTIGATORS

NSU-KPCOM investigators who are working with Klimas include Alison Bested, M.D.; Mary Ann Fletcher, Ph.D.; Maria Abreau, Ph.D.; Travis Craddock, Ph.D.; and Amanpreet Cheema, Ph.D. Former NSU INIM team member Gordon Broderick, Ph.D., now affiliated with Rochester Regional Health, is a collaborating researcher.

GWI GRANT COLLABORATOR SITES

Grant collaborator sites include Boston University, RTI International, Bronx VAMC, New Jersey War Related Illness and Injury Study Center, and the California U.S. Department of Veterans Affairs War Related Illness and Injury Study Center.

(Note: The U.S. Army Medical Research Acquisition Activity, 820 Chandler Street, Fort Detrick MD 21702-5014 is the awarding and administering acquisition office. This work is supported by the Office of the Assistant Secretary of Defense for Health Affairs, through the Gulf War Illness Research Program under Award No. W81X-WH1820062. Opinions, interpretations, conclusions, and recommendations are those of the author and are not necessarily endorsed by the Department of Defense.)

FACULTY Perspective

Time to Talk

Stigmatizing Disorder Demands Attention

BY NICOLE COOK, PH.D., M.P.A., AND ELIZABETH HAMES, D.O., CMD

Bowel incontinence (BI), also called fecal incontinence and accidental bowel leakage, is a devastating illness. BI is defined as the accidental passing of solid or liquid stools from the anus. It is generally caused by degeneration, irritation, and weakness of the anal sphincter and pelvic floor muscles, which can result in occasional loss of bowel control. Some feel an urgent need, while others have no sensation at all and total loss of bowel control.

BI is more common than most people think. Among noninstitutionalized people living in the community, between 7 to 15 percent have had

BI in the past year. Risk factors are numerous and include certain medications (e.g., metformin), obesity, trauma during childbirth, digestive tract disorders, constipation, smoking,

PEOPLE WITH BI OFTEN SUFFER

chronic disease, spinal cord injury, stroke, and other known and unknown causes. BI is more common among women and more common as people age.

People with BI often suffer emotionally, physically, and socially. In addition to physical discomfort due to skin irritation, BI is associated with anxiety, loss of dignity, anger, shame, depression, loneliness, and a high financial burden.

Though BI often reduces quality of life, most people do not speak with their health care providers about their condition. An estimated 70 percent of people surveyed said they did not talk about their condition with their doctors, often because they were either too embarrassed to discuss it, or because they believed there was nothing their doctors could do to help them.

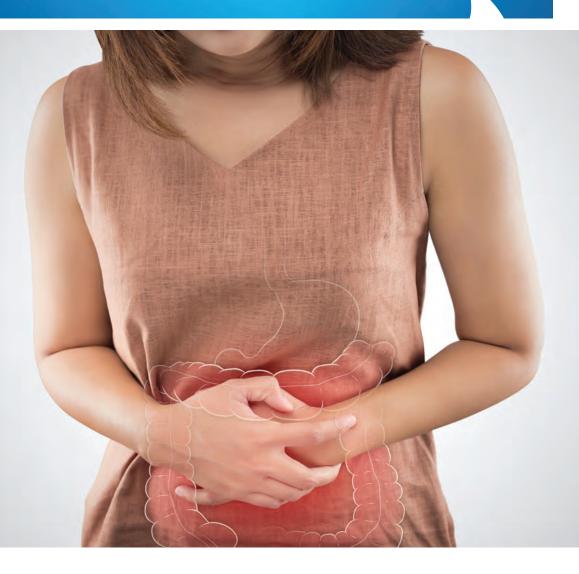
Among people who did speak to their providers, they were more likely to do so with their primary care provider. Since screening for bowel incontinence in clinical practice is rare, particularly among primary care providers, most patients live silently with the condition.

KPCOM clinical faculty members have a great opportunity to continue raising awareness among their trainees-students, residents, and fellows-about bowel incontinence. In KPCOM clinics, trainees are taught to regularly and actively question their patients about bowel and bladder incontinence, which are

> frequently linked. Faculty members also discuss evidence-based clinical guidelines from the American College of Gastroenterology and the American Geriatrics Society with trainees, which emphasize the core principles of

managing patients with BI. These include treating underlying causes as appropriate, reducing symptoms, decreasing frequency and severity of episodes, improving quality of life, and giving attention to patient-centered goals of care. Trainees need exposure and guidance in having these discussions with their patients early in their medical education.

One initiative implemented to try to improve generalized knowledge about BI is the Fecal Incontinence in Primary Care Consortium, which was funded from 2016-2018 by the Patient-Centered Outcomes Research Institute. Through the consortium, faculty members engaged patients, caregivers, researchers, providers, and other stakeholders to learn about knowledge gaps that align with their priorities.



They learned that, while patients are embarrassed to speak to their doctors, providers are also uncomfortable discussing BI. Moreover, many often do not feel they have the clinical skills to treat the condition. Faculty members also learned that many patients simply change their lifestyles to accommodate their symptoms.

Some patients stopped taking their medications completely without telling their providers. Other patients arranged their eating, sleeping, and activity schedule around the bathroom—always fearful of BI. To address some of these issues, consortium members worked together to develop patient-informed educational materials, which were tested for acceptability among patients in primary care offices in both North Carolina and Miami, Florida. The materials are public and available to anyone by contacting Nicole Cook at *nc570@nova.edu*.

Together, doctors, patients, and clinical faculty members can reduce the shame and silence around this affliction. \Box

Nicole Cook is an associate professor of public health, and Elizabeth Hames is an assistant professor of geriatrics.

TO LEARN MORE ABOUT BOWEL INCONTINENCE, PLEASE VISIT niddk.nih.gov/health-information/digestive-diseases/bowel-control-problems-fecal-incontinence.

PATIENTS AND CAREGIVERS ARE ENCOURAGED TO VISIT *iffgd.org/lower-gi-disorders/bowel-incontinence.html.*

COMmunications Briefs



Scott Colton, B.A., APR, director of medical communications and public relations for the Health Professions Division, received a Special Merit Award for Best Article of the Year from the Council for Advancement and Support of Education (CASE) District III. The category received more than 900 submissions. Colton's winning article, featured in the summer-fall 2018 issue of *COM Outlook*, was titled "A Parent's Worst Nightmare: Parkland School Shooting Impacts KPCOM Faculty Member."



James T. Howell, M.D.,

M.P.H., assistant dean of professional relations, received a Legacy Award for his dedicated and tireless service to the health care needs of patients in Palm Beach County at the Health Care District of Palm Beach County's 30th Anniversary Legacy Awards reception. Howell is one of the district's founding members.



Fourth-year student Alixandria Fiore Pfeiffer was selected as the KPCOM's 2018–2019 Student D.O. of the Year by her peers. Because of Pfeiffer's win, her award application also was submitted to the Council of Osteopathic Student Government Presidents, where she earned second place in the National Student D.O. of the Year competition. She was selected based on her commitment to community

service, embodiment of the D.O. philosophy, and professionalism, as well as her academic and leadership success.



Mark Sandhouse, D.O., M.S., associate dean of administration, was named KPCOM Professor of the Year during the NSU 17th Annual Faculty Reception in October. The Professor of the Year honor recognizes significant contributions to research, scholarship, and exceptional instruction.

From left: George L. Hanbury II, Ph.D., NSU president and CEO; Mark Sandhouse; and Ralph Rogers, Ph.D., NSU provost and executive vice president for academic affairs



Elaine M. Wallace, D.O., M.S.⁴, dean of the KPCOM, was recognized by *Florida Medical Business* magazine as one of Florida's leading women in medicine and by the *South Florida Business Journal* as one of the Power Leaders in Health Care in South Florida. Additionally, Wallace, a true lifelong learner, recently earned her fourth M.S. degree an M.S. in Education, which focused on the management of curricular programs. To acknowledge her impressive accomplishment without listing each degree individually, Wallace's four master's degrees are listed as M.S.⁴



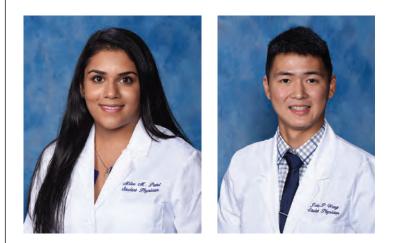


Samantha G. Kulangara, class of 2019, passed away on November 6 at the age of 27.





Second-year students **Manonmani Murugappan**, left, and **Regina Zambrano** claimed two first-place honors during the Council of Osteopathic Student Government Presidents Research Symposium held January 18 at the University of North Texas Health Science Center. Murugappan was named the Overall and Clinical/Case Study winner for her project "Validation of Bayesian Adaptive Quick Contrast Sensitivity Function Tests in Adults Without Ocular Disease." Zambrano earned top honors in the Basic Science Research category for her project "Modeling Melanoma-Induced Monocyte Conversion to Myeloid Derived Suppressor Cells to Identify Novel Immunotherapies."



Third-year students **Milee Patel**, left, and **John Wang** received a first-place award for their research project "An Overview of STD Rates in Broward County's Geriatrics Population." They presented their research at the Best Care Practices in the Post-Acute and Long-Term Care Continuum conference held October 24–27 in Lake Buena Vista, Florida. They also received a third-place award for the same research at NSU-KPCOM's Consortium for Excellence in Medical Education 10th Annual Scientific Research Poster Competition held November 9.

CLOSING Notes

Two NSU Colleges Win Innovation Award

The Dr. Kiran C. Patel College of Osteopathic Medicine (KPCOM) and the NSU College of Dental Medicine received the 2019 ADEA Gies Award for Innovation—Academic Dental Institution from the ADEAGies Foundation. The award honors the colleges' collaborative D.O./ D.M.D. degree program, which was established in 2007 and graduated its first two students in 2013.

The William J. Gies Award for Vision, Innovation, and Achievement recognizes significant contributions to oral health and dental education and pays tribute to individuals, institutions, and organizations that embody the ideals set forth more than 90 years ago by William J. Gies, Ph.D. The KPCOM administrators of this award-winning program are Delia Harper-Celestine, Ed.D., M.P.H., assistant dean of student and alumni affairs, and Hilda De Gaetano, D.O., M.S., FACOP, FAAP, senior assistant dean.

"This degree remains the only joint D.O./D.M.D. degree in the United States and now has seven graduates who are truly pioneers since they are



integrating oral and overall health," said Linda C. Niessen, D.M.D., M.P.H., M.P.P., dean of the College of Dental Medicine. "Some are practicing dentistry and incorporating medicine into their practices, while others are practicing medicine and incorporating oral health into their practices." □



Accepting the Gies Award are, from left, Delia Harper-Celestine, KPCOM assistant dean of student and alumni affairs; Elaine M. Wallace, D.O., M.S.⁴, KPCOM dean; Aaron Goodwin, D.O., D.M.D., 2015 graduate of the program; Linda C. Niessen, CDM dean; Abby Brodie, D.M.D., M.S., CDM associate dean for academic affairs; and Bruce Donoff, D.M.D., M.D., Harvard School of Dental Medicine dean, who introduced the NSU team.

Osteopathic Enrollment Reaches Historic High



According to data reported by the American Association of Colleges of Osteopathic Medicine (AACOM), for the first time in history, osteopathic medical students make up more than 25 percent of the U.S. medical student population. Fall 2018 first-year student enrollment at the nation's colleges of osteopathic medicine (COMs) increased by 5.7 percent from fall 2017 first-year student enrollment.

This rise in first-year matriculation brings the preliminary fall 2018 total student enrollment at U.S. COMs to 30,918—a 6.7 percent increase from the official total enrollment in fall 2017—and serves as a major milestone for the profession.

AACOM's preliminary fall 2018 enrollment report stated that the number of new matriculants climbed from 7,901 in 2017 to 8,281 in 2018; that the preliminary number of D.O. students graduating from medical colleges between July 1, 2017, and June 30, 2018, rose from 6,038 to 6,516; and that 8,574 students began their osteopathic medical education in 2018.

KPCOM Earns ACGME Sponsoring Institution Status

NSU-KPCOM received initial accreditation status from the American Council of Graduate Medical Education (ACGME) to serve as a sponsoring institution for graduate medical education programs, opening the door for existing and future KPCOM residency and fellowship programs to become accredited by the ACGME—the sole GME accrediting organization—after June 30, 2020.

The KPCOM has been sponsoring a psychiatry residency program, along with fellowships in allergy and immunology, correctional medicine, environmental medicine, sports medicine, and urology and sexual medicine. The American Osteopathic Association had previously accredited the KPCOM's correctional medicine, psychiatry, and sports medicine programs.

"As an ACGME sponsoring institution, the KPCOM will be transitioning its psychiatry program initially," said Janet Hamstra, Ed.D., assistant dean of graduate medical education, who serves as the college's designated ACGME institutional official. "We intend to apply for ACGME accreditation for our existing environmental medicine fellowship and allergy and immunology fellowship."

Once the KPCOM sponsors either an emergency medicine, family medicine, pediatric, or physical medicine and rehabilitation program, it will be able to transition its sports medicine fellowship to ACGME accreditation. Currently, there is no ACGME specialty accreditation for the college's correctional medicine or urology and sexual medicine fellowships.

"Having sponsoring institution ACGME accreditation enables the KPCOM to build new GME relationships with hospitals seeking to either begin new GME or expand their existing GME programs under KPCOM sponsorship," Hamstra explained. "We also intend to maintain our strong relationships with our many existing GME partners." □

KPCOM 2018 Giving Societies

Every effort has been made to ensure the accuracy of the following donor list. If you notice an error or omission, please contact Jordan Mathis, director of student and alumni affairs, at (954) 262-1491 or *jm3005@nova.edu*. The list below summarizes donations received from January 1, 2018, through January 15, 2019.

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NSU researchers are on the front lines, addressing health issues that have reached alarming heights since our veterans returned from the Gulf War 28 years ago. Led by Nancy Klimas, M.D., recognized worldwide for her expertise on Gulf War illness and other complex diseases, the institute is bridging the distance between bench-side research and bedside care.

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