



## NATIONAL YOUTH LEADERSHIP FORUM: MEDICINE

1101 Pennsylvania Avenue NW • Suite 300 • Washington, DC 20004 • (800) 745-4918 • TeachMedicine@envisionexperience.com • NYLFmed.com/nominate  
Offering Leadership and Career Exploration Experiences Since 1985 | More than 800,000 Program Alumni

September 1, 2017

~~Mr. Bryan Moretz~~

Giles High School  
1825 Wenonah Avenue  
Pearisburg, VA 24134

~~Dear Mr. Moretz,~~

Thank you for previously nominating your exceptional students from Giles High School to attend the *National Youth Leadership Forum (NYLF): Medicine*. I appreciate your service as a teacher, mentor, and advisor to your highly-motivated students. I also recognize your unique ability to select from among the most promising students in your school, those with true leadership skills and academic merit. For that reason, I would like to offer you the opportunity to nominate students to attend *NYLF Medicine* next summer, 2018.

As you may know, Jadan Robertson from Giles High School recently attended *NYLF Medicine* and was an excellent addition to the program.

Several other students from Giles High School have previously attended an Envision leadership or career program. You may recognize one or more of these outstanding students, who are part of our distinguished alumni association, on the list enclosed.

I am seeking your nominations of students who would most benefit from participating in *NYLF Medicine* and contributing to this unique educational program. Nominate up to ten of your students who are in grades 9 – 11 during the 2017/2018 academic year and who have demonstrated leadership potential.

The students you nominate will have the opportunity to select any one of our exciting nine-day programs offered next summer in Atlanta, Boston, Chicago, Houston, Los Angeles, New York City, Raleigh-Durham, San Francisco, or Washington, DC.

For your convenience, you may submit your student nominations directly online through our private and secure website at **NYLFmed.com/nominate** using your Nominator ID: 920980-51409407, complete the Nomination Certificate enclosed and fax it toll-free to (866) 722-0645, or return your completed Nomination Certificate in the enclosed postage-paid envelope. The deadline to submit your nominations is September 22, 2017.

As an alumnus of the inaugural session of *NYLF Medicine*, I am a strong believer in the educational opportunities offered by this challenging and motivational program. I was first exposed to the world of medicine through my participation in the program, and I credit it and the life-changing experience I gained for ultimately guiding my decision to choose a career as a physician.

During previous forums, students took part in small group seminars hosted by some of the most prestigious and technologically advanced medical institutions and schools, including the David Geffen School of Medicine at UCLA in Los Angeles, The Johns Hopkins University School of Medicine in Baltimore, Harvard Medical School in Boston, and many more of the finest establishments in the nation.

Forum students have also had the opportunity to learn from distinguished medical leaders and research pioneers — visionaries and practitioners whose dedication and ability have brought them to the pinnacle of their profession.

Hundreds of outstanding physicians — such as Dr. Mary Young, Director of Infectious Diseases at Georgetown University Hospital; Dr. Warner Greene, Director of the Gladstone Institute of Virology and Immunology; and many others — have generously given their time to the program.

During nine days of firsthand experiences in a motivating and challenging environment, students will examine state-of-the-art diagnostic tools and future medical specialties in detail and will gain a valuable head start toward the careers and successes they dream of achieving.

Envision is proud to enhance and enrich our STEM programs by incorporating select high-quality learning resources from our newest educational content partner, Discovery Education.\*

By attending *NYLF Medicine*, qualifying students may also receive college credit through George Mason University.

Nominees who require financial assistance may access an online fundraising guide designed to help students raise funds in order to earn tuition for the program. Envision also awards a limited number of partial scholarships based upon financial need, scholastic merit, leadership achievement, and other factors. Submission of a scholarship application is required to be considered for an award.

Because *NYLF Medicine* is designed for the most highly motivated high school students who possess the academic promise and dedication to become the next generation of leaders in medicine, you — as a professional educator working with these young high-achievers every day — are best qualified to help recognize them.

The young men and women you nominate will receive letters of nomination and all of the information they will need to enroll, without obligation. If you have any questions about the program, contact the Office of Educator Relations toll-free at (800) 745-4918 or by email at [TeachMedicine@envisionexperience.com](mailto:TeachMedicine@envisionexperience.com).

Thank you for your ongoing commitment to your students' success.

Sincerely,



Shashin Doshi, M.D.  
Senior Councilor  
National Youth Leadership Forum

P.S. There are three ways to nominate: Submit your nominations directly online through our private and secure website at [NYLFmed.com/nominate](http://NYLFmed.com/nominate) using your Nominator ID: 920980-51409407, complete the Nomination Certificate enclosed and fax it toll-free to (866) 722-0645, or return your completed Nomination Certificate in the enclosed postage-paid envelope. The deadline to submit your nominations is September 22, 2017.



Discovery Education works with Envision and other like-minded organizations to foster STEM achievement. By providing select STEM learning resources, and through the delivery of universally accessible afterschool STEM curriculum, Discovery Education inspires curiosity and exploration.



# An Experiential Education

*During an eventful day at the Houston Methodist Institute for Technology, Innovation and Education, 300 high school students got a glimpse of life in medicine*

BY ALEX ORLANDO



**LEFT:** Over 300 high school students coming from 23 different states across the country, as well as Guam, Puerto Rico and China—came to MITIE as part of the National Youth Leadership Forum on Medicine. **ABOVE:** Lectures and video presentations provided an overview of different surgical specialties.

White surgical gloves contrasting vividly with her crisp, black blazer, rising high school junior Samantha Lane steadied her hands as the cauterizing instrument effortlessly sliced through the skin of the chicken breast. Holding the surgical needle drivers as prompted (“like a pencil”), Lane began delicately sewing the skin together—with trepidation at first, but her widening smile provided a window into her increasing confidence. As the incision closed, her peers from high schools near and far—all in professional attire—breathed similar sighs of satisfaction from around the room.

Over 300 high school students participating in the National Youth Leadership Forum (NYLF) on Medicine came to the Houston Methodist Institute for Technology, Innovation and Education (MITIE) to experience a prospective career in medicine firsthand. Hailing from 23 different states across the country, as well as Guam, Puerto Rico and China, the students spent the day immersed in a wide range of surgical techniques and technologies.

“The whole concept behind the National Youth Leadership Forum on Medicine is to expose the students to different kinds of career options and different fields of medicine to really give them a firsthand experience,” said Lois Bracey-Barnes, high school STEM academy director at Envision, an experiential education organization that runs the NYLF and other programs developed to help students cultivate leadership, scholarship and career skills. “Going to medical school is a huge commitment, so it’s really about trying to give them that exposure to ensure that they really are interested in that career.”

Upon arriving at MITIE, the students divided into two groups; half of them filed into the auditorium for a series of lectures and video

presentations. From a brief overview of the training capabilities at MITIE—where surgeons are brought in from around the nation to hone their skills in new surgeries, devices and techniques—to a presentation chronicling pathways towards a medical career, the students were immersed in possibilities.

“We show them a bunch of entertaining surgery videos in different fields, because I think everybody, deep down, likes to see stuff like that,” said Albert Y. Huang, M.D., surgical fellow at MITIE. “This year, we had a video where we show them a C-section to expose them to the world of OB-GYN, some appendectomies to showcase bread and butter general surgery practices, and even a brain tumor removal and a hip replacement.”

“It’s been incredible getting to see all of the different fields,” said Lane, a student at Langham Creek High School. “I’m not sure exactly what I want to do yet, so this helps you see what you’re interested in studying or doing, which is pretty cool.”

While their peers were inundated with information downstairs, the other 150 students rotated through a series of simulation and training stations. In one room, a high-tech mannequin, dubbed “SimMan,” acted as a surrogate patient, croaking out complaints and replicating poor vital signs to simulate an artificially stressful environment. Down the hall, students precariously navigated tubes through both intubation and endoscopic simulators. Next door, the da Vinci surgical robot took others through training modules that evoked

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— LOIS BRACEY-BARNES  
High School STEM Academy Director at Envision

virtual reality video games. Adjacent to the suturing station, students methodically maneuvered laparoscopic instruments to move brightly colored objects around pegs. Reminiscent of a carnival game, the practice is part of MITIE's training process for minimally invasive surgery.

"We've broken it down to very basic tasks," Huang explained, outlining the protocol for practicing surgeons training at MITIE. "If you can demonstrate proficiency in these specific types of movements, then we know when you're in the operating room and need to do a similar motion with real tissue, you're capable of doing it in a safe manner. It helps with just using the instruments, holding them the correct way, and becoming a bit more ambidextrous."

Conceived as a resource for health care professionals seeking to maintain excellent clinical skills and stay abreast of technological developments in their fields, MITIE leverages its resources every day to help practitioners refine their technique.

"If I want to learn a new way of doing a surgical procedure, I can read about that in an article or in a book, go and hear a talk about it, watch a video, or even go and see it live," noted Brian J. Dunkin, M.D., medical director of MITIE and chief of endoscopic surgery at Houston Methodist Hospital. "Even then, there's a cognitive disconnect where I've got the knowledge about it, but there's this leap between that and being presented with the challenges that the technical exercise requires. There's no substitute for rehearsal."

"You wouldn't read about being a violin player and never practice the violin," he added. "You'd certainly never read a new piece as an accomplished player and not rehearse that before getting in front of an audience. It's the same thing in our profession. We shouldn't be running off to the operating room to try something without being thoughtful about how we introduce that. We want the kids to get a little bit of flavor for the fact that this stuff isn't just born and innate—you have to spend a lot of time learning to do what we do."

Over the course of nine days, the students participating in the NYLF Medicine program had the opportunity to visit several institutions throughout the Texas Medical Center, including Baylor College of Medicine, The University of Texas Health Science

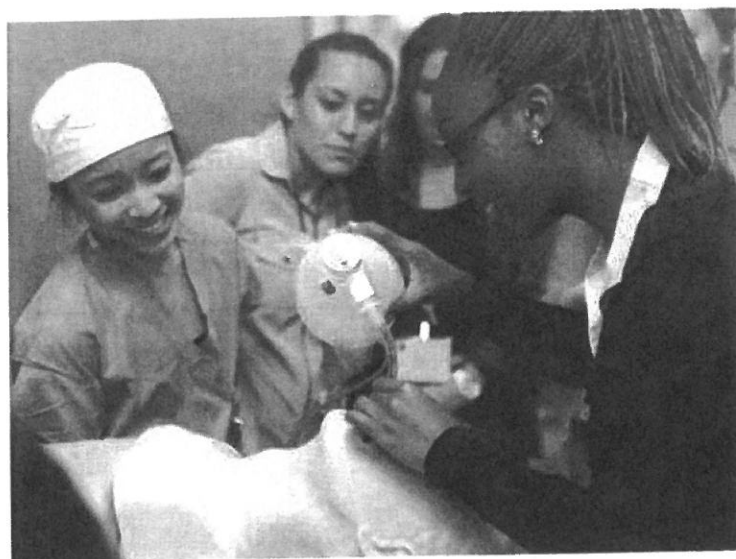
Center at Houston (UTHealth) Medical School, Texas A&M Health Science Center and the University of Texas Medical Branch at Galveston (UTMB). The sheer scope of their immersion into different aspects of a career in medicine left a lot to consider.

"What they should think about doing is spending some of their own time to immerse themselves in the field," said Huang of any students considering embarking on a career in medicine. "Whether that's finding a friend or family member that's a physician, or even just going to a hospital or doctor's office to shadow somebody. Find somebody that you can follow around and see what it's really like, day-to-day. If you're passionate about anything, you should naturally try and seek out people who have done it and hear directly from them. I think that's what really makes a difference."

For students like Lane, the benefits of their experience extend far beyond the tangible skills they sampled at MITIE. "Today, I'll be leaving with some techniques and know, 'OK, this is what I'm going to have to do to become what I want to be,'" she said. "Not only does this program teach you medical things and give you experience, it teaches you how to be more social and have people skills if you don't have those."

"I know we're skewed towards surgery, but I hope the kids leave with a better understanding of what medicine's like, a little bit of a generalized thought plan on the steps they need to go through to be successful, and maybe take away some tips on how to do their own personal exploration into these fields," said Huang. "You plant the seed of an idea of a hospital that's not some inaccessible thing—you can actually go in and find somebody to be a mentor and talk to them. This is the step that breaks that invisible wall."

"As a high school student, I never thought about stepping foot inside of a hospital unless somebody was sick," he added. "Now these kids can walk into a hospital and see that there's somebody interested in taking them under their wing. From the hands-on experience and training to getting to talk to people who have gone through it themselves, that's what I hope they realize and see through all of this." ■



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— BRIAN J. DUNKIN, M.D.

*Medical Director of the Houston Methodist Institute for Technology, Innovation and Education*



**TOP/BOTTOM RIGHT:** Students simulate intubating a patient—the process of inserting a breathing tube into the trachea. **MIDDLE/LOWER LEFT:** Using the same surgical techniques as health care professionals, students practice suturing on chicken breasts.