



MERIT 2016-2017



A Letter from our Executive Director

MERIT was founded on the belief that there is incredible talent and potential among Baltimore high school students. Time and time again, our scholars pushed us to reimagine what is possible as they continued to reach the highest levels of success. Over the past year, we challenged our scholars with a more rigorous program than ever before.

During the school year, our scholars took two new college-level science courses, including Foundations of Biomedical Research, designed to prepare them for real-world lab and hospital experiences. Over the summer, we paired in-person shadowing of health care professionals with advanced science instruction to give our scholars the thorough background they will need to master science classes in college. With remarkable determination, they spent long nights reading dense scientific texts well beyond the level expected of most high school students.

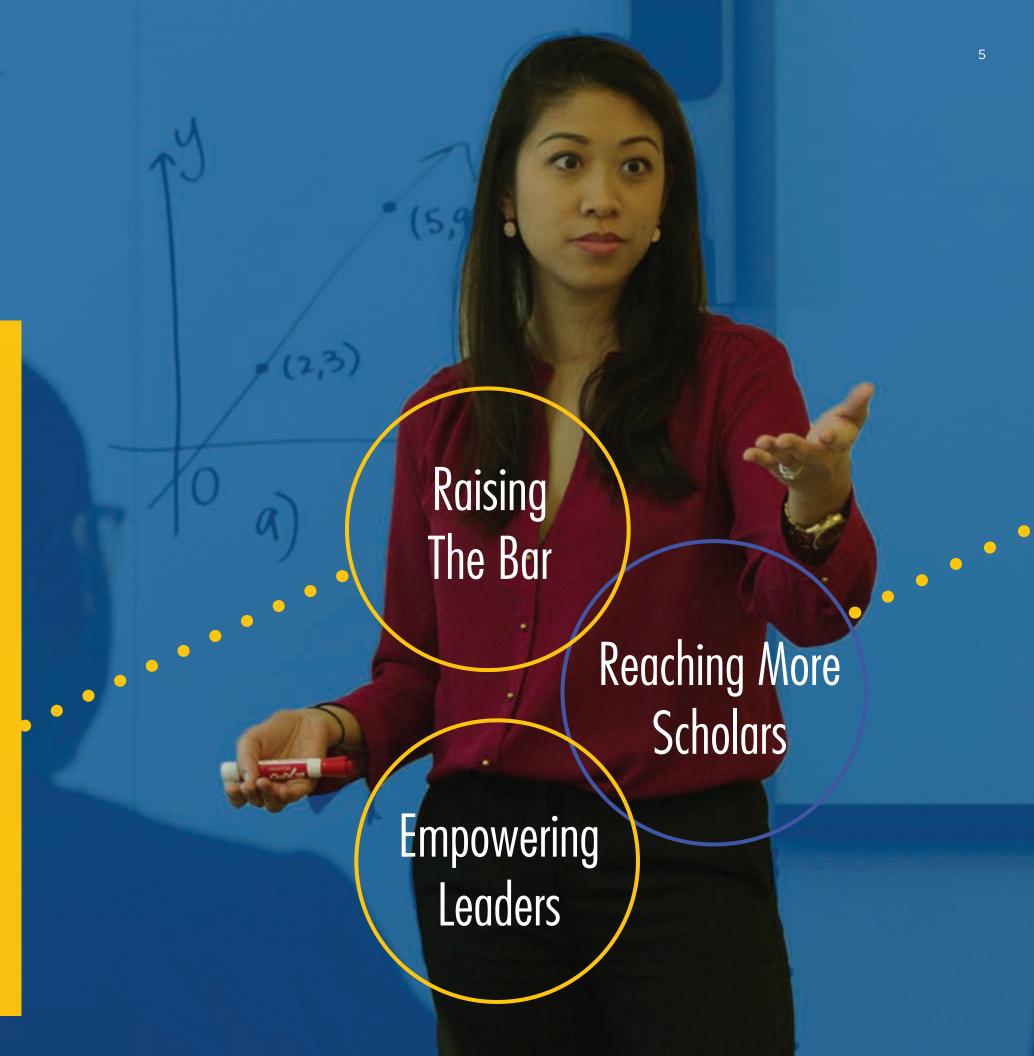
MERIT scholars met and exceeded every challenge we put in front of them. In rising to these high expectations, they show they have more than mere passion fueling them. They are also prepared to tackle the academic rigor and professional expectations of being pre-medical students in the 21st century.

This year, we watched our graduating seniors shatter every "ceiling" they could find. The bright-eyed scholars I first met as sophomores two years ago left their legacy on our program by achieving astounding success with college admissions and earning recordbreaking scholarships. You can find their stories throughout this report. At a time of increasing uncertainty and division, our scholars give us hope in a better Baltimore and a better world. Given the right resources and opportunities, we know there is no limit to what they can achieve. Join us for a front-row seat to watch them succeed!

Onward and upward,

Stephanie Landicho, Executive Director





Academic Success Academic Success



MERIT is raising the bar, pushing its Scholars to the highest levels of achievement. Through college-level science coursework, independent research projects, and paid summer internships, MERIT Scholars are prepared to tackle the academic rigor and professional expectations of being pre-medical students in college.

This year MERIT introduced two new college-level science courses:



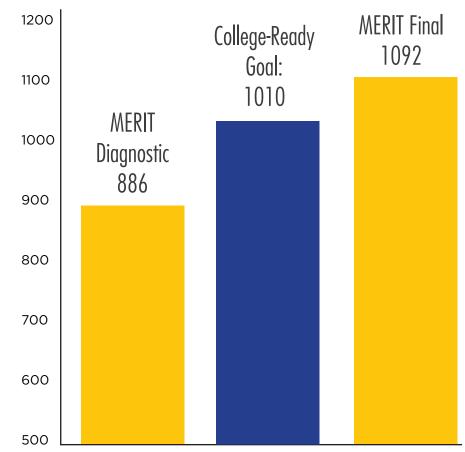
Anatomy and Physiology

In Anatomy and Physiology, scholars learn the clinical science of common disease conditions, providing a solid foundation for advanced coursework. Scholars participate in classroom instruction led by medical students and other healthcare professionals as well as hands-on, simulated clinical activities.



Foundations of Biomedical Research

The new Research Lab Skills course is designed to build proficiency with handson lab technique and to prepare scholars for their summer research internships. By learning tangible skills, scholars are building a toolkit for future work opportunities.



MERIT Class of 2017: SAT Growth

Through hard work and with MERIT's support, our scholars have demonstrated impressive growth on the SAT. This year, senior scholars have increased their scores by an average of 206 points between diagnostic and official tests. When this class took their SAT diagnostic test last year as 11th graders, their average score was 886 points out of 1600, more than 100 points below the "college-ready" benchmark according to the CollegeBoard. After the official test in October, they averaged a score of 1092, which is above the "collegeready" benchmark for 12th graders. This impressive growth helped contribute to our seniors' resounding success with college applications.



• From 1010, which is barely "college ready," to 1380, which placed him in the 95th percentile nationally

Through MERIT:

- Earned 88 hours of independent research in a neuroscience lab
- Co-founded a synthetic biology research team that won bronze at an international bioengineering competition
- Presented at 4 research symposiums
- Won a scholarship based on his research

Earned a full-ride scholarship to Brown University

Goal: Study neuroscience and become a physician.



8 Hands-On Science Hands-On Science 9



Brain Anatomy Lab

Junior scholars had the exciting and rare opportunity to examine human brains during an anatomy lab with the neurosurgery student interest group at the Johns Hopkins School of Medicine. Medical students graciously donated their time to work with MERIT scholars in small groups, which provided a personal and engaging environment.



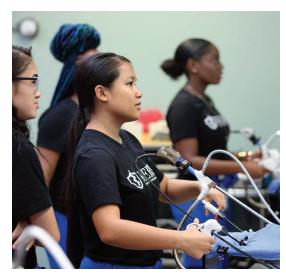
Respiratory Workshop

A team from the Pulmonary Department at Children's National Medical Center led sophomore scholars through a handson respiratory simulation to learn more about asthma. Scholars analyzed the genetic and environmental causes of asthma before taking part in a simulated treatment of an asthma attack.

Surgery Simulation

At MERIT's Surgery Simulation Day, scholars spent time in the Minimally Invasive Surgical Training and Innovation Center (MISTIC), where they were able to learn and practice various surgical techniques and procedures. With the help of the Department of Surgery and Department of GYN/OB staff, the students were guided through pelvic surgery simulation, a suturing tutorial, laparoscopic simulators, a bronchoscopy lung box with a scope, and the DaVinci SI Robotic Simulator. The day also featured guest speakers Dr. Robert Higgins, Dr. Tola Fashokun, Dr. Maggie Arnold, Dr. Errol Bush, and Dr. Seth Goldstein, who shared about their journey to surgery and imparted advice to the students on how to continue pursuing their passions.





Summer Internships Summer Internships

scholars won scholarships based on the quality of their summer research Legional Health Care in the Real World SMI: Science of Medicine Internship Art of Medicine Internship

Rising Junior Scholars

Goal: Diverse career exposure

Clinical Internship: Observe health professionals treating patients in the real world.

Role Models: Shadow up to 20 different health care professionals in a variety of fields

Rising Senior Scholars

Goal: Improve STEM & research skills

Research Internship:

Participate in lab or public health research

Mentoring: Work closely with 1 research mentor, who supports scholar through their project

Overall Attendance in SMI (Rising Seniors)

After this summer in MERIT...



"I have a better understanding of careers in health care."

"I am more committed to working in an underserved community"

"I am confident in my ability to succeed in college-level science."

"I understand the professional skills necessary for a career in health care."

98%

"MERIT has helped me be more successful in school."

Spotlight: Amaya Simpson: Future Science Researcher



This summer, Amaya Simpson (left) conducted cancer research at the Sidney Kimmel Comprehensive Cancer Center in the lab of Dr. Ben Ho Park at the Johns Hopkins School of Medicine. Under the mentorship of graduate student lan Waters, Amaya created a dual plasmid system for labeling and killing cells in coculture. During this experience, Amaya fell in love with hands-on biological research and now aims to one day attain a PhD. This year, she was one of two high school students chosen to present her research to the medical physicians community at the November 2017 Medical Grand Rounds at the Johns Hopkins Hospital.

College Access Support College Access Support

College Access Support



100% of MERIT Seniors Accepted

to 4-year

universities

total academic scholarships earned

100%

of scholars had financial need met



In the spring, junior scholars completed a weeklong college tour over spring break, travelling to Atlanta and back. MERIT scholars toured a wide variety of schools, including large universities such as Duke and UNC Chapel Hill, liberal arts colleges like University of Richmond, and historically black colleges such as Morehouse and Howard. All together, they visited 13 colleges and universities.

of scholars had never taken a college tour previously

of scholars felt confident in deciding on a college that is right for them

MERIT scholars gained exposure to diverse college settings, helping them determine their ideal learning environment. Through group discussions and journaling, scholars thought deeply about the factors that are most important to them. The trip also included a variety of enrichment opportunities, including visits to the CDC and the National Museum of African American History and Culture. For the MERIT scholars, the tour was an eye-opening opportunity, a great bonding experience, and a trip they will remember.

Scholar Spotlight: Martin

Inspired by both his clinical and research summer internships with MERIT, Martin aspires to one day attain his MD/PhD. This year, he was accepted to 100% of the colleges to which he applied, and was awarded over \$150,000 in merit-based scholarships. He is now attending the University of Maryland Baltimore County as a biology major and a member of the prestigious and renowned Meyerhoff Scholars Program -a program for high-achieving students pursuing careers as research scientists and engineers. He finished off his first semester in college w a 3.75 GPA.



14 Scholar Leaders Scholar Leaders



At MERIT's 7th Annual Research Symposium, scholars presented their summer research to a crowd of friends, family members, community members, and health professionals. The event featured inspiring speeches from scholars including Claudia, who declared her unwavering determination to become a doctor despite her status as an undocumented immigrant, and Amaya, who described how MERIT helped overcome her insecurities and discover her confidence. Guest speakers included Dr. Erica Johnson, assistant professor of medicine at Johns Hopkins Bayview and a graduate of Western High School, and State Senator Bill Ferguson, a former teacher and an advocate for education.



This year, our scholars participated in several scholarled community service projects. In the fall, scholars identified and planned an event to volunteer with their mentors at the Baltimore Walk to Defeat ALS. The MERIT scholars selected the event, submitted a budget for all activities, coordinated logistics, and organized carpools. During our holiday party, Kayla (left) and the other scholars made lunches for a homeless shelter.

MERIT "Bio Crew" Wins Award

The MERIT Synthetic Biology team, also known as the "Bio Crew," won bronze at the International Genetically Engineered Machine (iGem) competition in Boston. The scholars, who received an all-expenses-paid trip, developed an innovative proposal to use bacteria to break down plastic bottles in the Inner Harbor and reduce pollution. Their work landed them in The Baltimore Sun, where they were featured as the front-page story!





Spotlight: Mercedes, Environmental Health Pioneer

Mercedes is the co-founder of "Baltimore Beyond Plastic", a youth-led organization dedicated to decreasing the effects of plastic waste pollution in Baltimore. Mercedes has led students across in the city in legislative advocacy efforts, peer-to-peer outreach, and educational campaigns about the dangers of plastic pollution. This year, she also led the 1st Youth Leadership Summit on Environmental Justice and had over 100 students in attendance. She was named the Chesapeake Bay Trust Student of the Year, and was one of six students across North America who received the Brower Youth Award for her leadership in environmental sustainability efforts.



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MARYLAND UNIVERSITY



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- Baltimore City Public Schools
- Baltimore City Public Schools Office of College and Career Readiness
- Baltimore City Health Department
- Baltimore Underground Science Space (BUGSS)
- CUPID Summer Translational Oncology Program
- Institute of Marine and Environmental Technology (IMET)
- Johns Hopkins Brancati Center for Community Care
- Johns Hopkins Bayview Medical Center
- Johns Hopkins Center for Social Concern
- Johns Hopkins Community Physicians
- Johns Hopkins Department of Surgery
- Johns Hopkins Lifeline

Johns Hopkins Hospital

• Johns Hopkins School of Medicine

- Johns Hopkins School of Nursing
- Johns Hopkins School of Public Health
- Johns Hopkins Student Outreach Resource Center (SOURCE)
- Johns Hopkins University
- Maryland Out Of School Time Network
- Maryland State Department of Education
- MarylandCAN
- Mayor's Office of Employment Development City of Baltimore
- Medicine for The Greater Good
- National Association of Health Service Executives
- Teach for America
- University of Maryland Incentive Awards Program
- University of Maryland Medical Center



Coty and Yarnee have been best friends in the MERIT program since they started as sophomores. They experienced their clinical and research internships together, and have gotten to spend ample time together at MERIT events, professional symposiums, and trips to different schools across the country. This year, they are both entering freshman at the Notre Dame University of Maryland where they are both pursuing Bachelors of Science in Nursing degrees. They both aim to work in Baltimore as NICU nurses one day.

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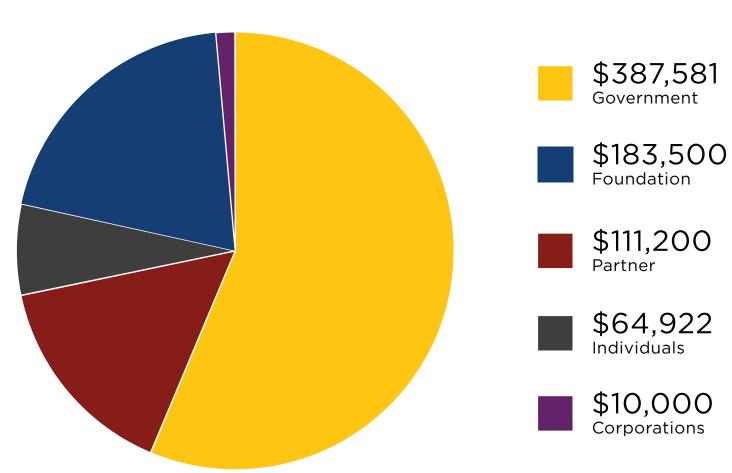
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MERIT's growth over the past seven years would not be possible without the generosity of our passionate and dedicated donor community. Most notably, the Johns Hopkins Medical Institutions have been a pioneering partner and supporter since MERIT's founding in 2010. MERIT's growth in recent years has happened in large part to the Maryland State Department of Education (MSDE) 21st Century Community Learning Centers grant program. To all of our supporters, thank you for believing in our scholars' dreams and their potential to change the face of health care.





FY17 Expenses: \$452,042 FY18 Budget: \$751,502

*Note that due to the timing of some grants across two fiscal years, our fundraising total varies slightly from the total reported in our audited financial statements and Form 990 for FY17.

Donors

\$100,000 and Above

Maryland State Department of Education - 21st Century Community Learning Centers

\$25,000 - \$99,999

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