

COVID-19, Summer 2020, and the Value of an Education

Some days, it feels as though the world has tilted farther on its axis.

A few months ago, who could have imagined that we would wear face masks as part of our daily routine. Or that we would enter the summer experiencing widespread protests and civil unrest. Yet, this is where we find ourselves.

Therefore, Aspirnaut™ is moving forward with renewed purpose and intention to effect positive change.

Perhaps now more than ever, talented youth from rural and diverse backgrounds need access to opportunity that will equip them to tackle big questions and find novel solutions. So, with fourteen high school students from nine states, we will conduct a two-week online version of the Aspirnaut™ summer program that is packed full of content, mentors, and activities to help prepare participants for success in STEM careers.

And, we honor Aspirnauts who have completed a segment of their educational journey this spring. They are spectacular in so many ways. Intelligent and motivated, each of these students is also resilient, resourceful, and a unique individual who will help us find a way through this and the next wave of challenging circumstances. **They will change the lives of their families and communities for generations to come.**

We will keep taking targeted steps to match talent with opportunity. And, we salute all the Aspirnauts as they *aspire, seek, and achieve.*

Julie Hudson, Executive Director

DONATE NOW

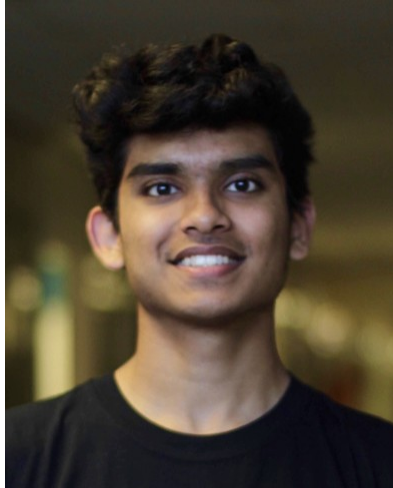
Meet the 2020 Summer Virtual Program Interns



Kaleb Branch
Jonesboro, Arkansas



Kaleigh Coker
Sheridan, Arkansas



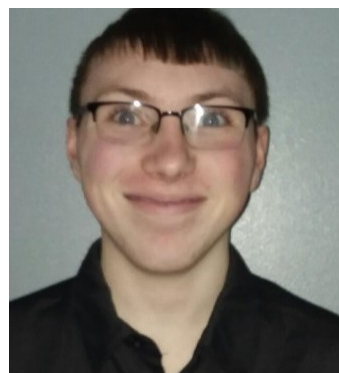
Shanay Desai
Madison, Mississippi



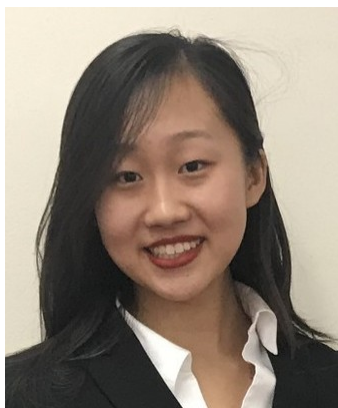
Tommy Fowler
Blytheville, Arkansas



Martina Gergis
Nashville, Tennessee



Tanner Herington
Bryant, Illinois



Britney Hsu
Taos, New Mexico



Lauralee Jarrett
Brinkley, Arkansas



Riya Mittal
Blytheville, Arkansas



Falynne Murphy
Fowlerville, Michigan

Michelle Orioha
Austintown, Ohio

James Pulley
Forrest City, Arkansas



Krista Tolliver
Hampton, Virginia



Madanna Vue
St. Paul, Minnesota



Medical School Graduate

Kaitlyn Reasoner, M.D., a three-time Aspirnaut™ research intern, graduated from Vanderbilt University School of Medicine in May. She will start her residency in Internal Medicine Residency at Vanderbilt University Medical Center in June. Kaitlyn received the Robert F. Miller Award for Community Service and Engagement for her four years of service to the Shade Tree Clinic, a comprehensive, free health clinic run by Vanderbilt University medical students. Her roles there included social work and assisting in the organization of an annual outreach program that provides free hand and upper extremity surgeries to patients in the middle Tennessee area. **Congratulations Kaitlyn!!**

College Grads

Congratulations 2020 College Graduates!! Your perseverance and hard work have paid off. **Sydney Diehl** was a 2015 Aspirnaut™ intern, attended Christian Brothers University majoring in biochemistry, and will start the Masters Program for Analytical Chemistry at Kennesaw State University in the fall. **Jacob Edwards** was a 2019 Aspirnaut™ intern from Vanderbilt University majoring in biological Sciences. He will attend the University of Colorado School of Medicine - Anschutz Medical Campus. **Elizabeth Fashakin** was a 2018 Aspirnaut™ intern and resident counselor from Vanderbilt University majoring in neuroscience and French with a minor in African American and diaspora Studies. **Azia Jackson** is a two-time Aspirnaut™ intern and graduated from Vanderbilt University with a degree in psychology. **Kamila Nurmakova** is a two-time Aspirnaut™ intern who attended Berea College. Kamila graduated with a degree in chemistry and will begin the Ph.D. program in Biophysical Chemistry at Yale University. **Stephanie Zhang** was a 2018 Aspirnaut™ intern and resident counselor from Vanderbilt University, majoring in Human and Organizational Development, Health, and Human Services, and will continue her education at Vanderbilt in the Masters of Nursing program.



Sydney Diehl



Jacob Edwards



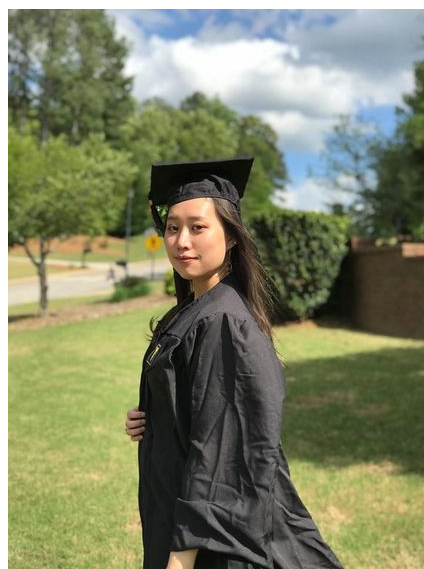
Elizabeth Fashakin



Azia Jackson



Kamila Nurmakova



Stephanie Zhang

Congratulations!

Tatiana Mikhailova will continue her academic career in the M.D./Ph.D. program at The State University of New York (SUNY). Tatiana was a 2015 Aspinaut™ intern from Berea College and graduated with a degree in chemistry. After graduation, Tatiana enlisted in the U.S. Army and is currently a member of the U.S. Army Reserves.



College Bound

Congratulations High School Class of 2020! We are proud of your achievements and are excited to share the excitement of your graduation. Good luck in all your upcoming endeavors. We can't wait to celebrate all your future successes.

- **Kaleb Branch (2019, 2020)** graduated from Valley View High School in Jonesboro, Arkansas, and will attend Emory University. Kaleb was the Senior Class President and Student Body President during his senior year.
- **Devontay Buford (2018)** graduated from Forrest City High School in Forrest City, Arkansas, and will attend the University of Tulsa.
- **Cadiz Cantwell (2018-2020)** graduated from Harpeth High School in Kingston Springs, Tennessee, and will attend Clemson University. Cadiz was valedictorian of her class and received the Lion's Club Scholarship, the National Honor Society Scholarship, and The Scarlett Family Foundation STEM Scholarship.
- **Kaleigh Coker (2020)** graduated from Sheridan High School in Sheridan, Arkansas, and will attend Hendrix College. Kaleigh graduated with Distinguished Honors.
- **Frankeshia Foxx (2019)** graduated from West Tallahatchie High School in Webb, Mississippi, and will attend Tougaloo College. Frankeshia was the Salutatorian of her class.
- **Tikkri Greer (2018)** graduated from Forrest City High School in Forrest City, Arkansas, and will attend Tennessee State University.
- **Mehreal Ibrahim (2017-2019)** graduated from STEM Prep High in Nashville, Tennessee, and will attend Sewanee: The University of the South. Mehrael recieved awards for excellence in Calculus, Highest Anatomy grade, and a National Honor Society certificate.
- **Mariham Mousa (2019)** graduated from STEM Prep High in Nashville, Tennessee, and will attend Lipscomb University.
- **James Pulley (2019, 2020)** graduated from Forrest City High School in Forrest City, Arkansas, and is currently undecided on where he will attend college next year.
- **Karis Sullivant (2018)** graduated from Poyen High School in Poyen, Arkansas, and will attend Henderson State University.
- **J'Kalya Thomas (2019)** graduated from KIPP Delta High School in Helena, Arkansas, and will attend Tuskegee University.
- **Trevion Williams (2018)** graduated from Forrest City High School, Forrest City, Arkansas, and will attend Hendrix College. Trevion was valedictorian of his class.
- **Madison Yarbrough (2018, 2019)** graduated from Poyen High School, Poyen, Arkansas, and will attend Wesleyan University. Madison was accepted into the Wesleyan Mathematics and Science Scholars program.



Kaleb Branch
Emory University



Devontay Buford
University of Tulsa



Cadiz Cantwell
Clemson University



Kaleigh Coker
Hendrix College



Frankeshia Foxx
Tougaloo College



Tikkri Greer
Tennessee State University



Mehrael Ibrahim
Sewanee: The University of the South



Mariham Mousa
Lipscomb University



James Pulley
Undecided



Karis Sullivant
Henderson State University



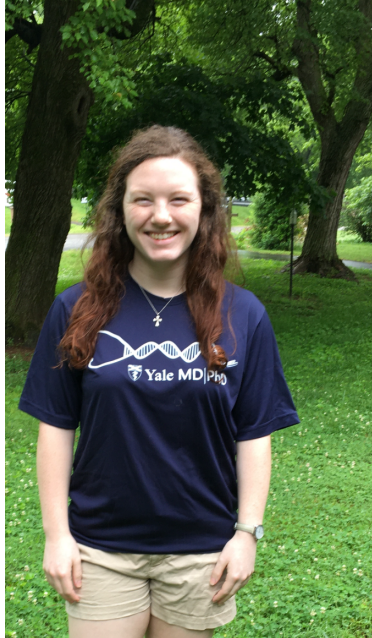
J'Kayla Thomas
Tuskegee University



Trevion Williams
Hendrix College



Madison Yarbrough
Wesleyan University



Featured Aspirnaut™

Amy Rushing

Amy Rushing is a four-time Aspirnaut™ from Poyen, Arkansas, and graduate of Vanderbilt University with a degree in biomedical engineering. During her gap years, Amy worked in Dr. Ela Knapik's laboratory as a research assistant. She will begin the M.D./Ph.D. program at Yale School of Medicine in the fall.

1. How did you hear about Aspirnaut™, and what made you apply?

There wasn't much academic opportunity in rural Arkansas. My high school science teacher, Mrs. Amanda Jones, and my mom really pushed me to apply. I was very scared but thought it would probably be good for me. It's difficult to grasp what a fantastic opportunity Aspirnaut™ is at 16, so I'm thankful I had others pushing me.

2. How has Aspirnaut™ made a difference in your life?

At the end of my first summer, Dr. Billy Hudson stood by me on the last night and said, "I want you to come back next year." I replied, "Yeah, I'll think about coming back to Aspirnaut™ next summer." He looked at me and said, "No, I want you to come back in the fall." When I realized he was telling me to apply to Vanderbilt, that I had a shot of getting in, I decided to go for it. That conversation changed my life.

When it came time to apply to college, I didn't have anyone to look up to for advice. Elite level schools require a personal statement, and you need to know what you're doing. Neither of my parents went to college. None of the small, local state schools required personal statements, so no older friends could help either. Even my Guidance Counselor said she knew nothing about writing personal statements, so I called Dr. Julie Hudson. She spent hours talking to me on the phone after school explaining the Common Application process for college admission. Her input was invaluable in putting my story into words and crafting a successful application.

I didn't really like research that much at first. I came back to Aspirnaut™ a second time because I wanted to leave Poyen, and I needed the money. After my second summer, though, I started to like it a bit more. I continued research throughout the school year and participated in Aspirnaut™ in the summers, and I slowly learned how to think like a scientist. Once the science wasn't always over my head, I appreciated how stimulating research is and how creative it lets me be. I can't imagine doing anything else.

The Hudsons helped me see how much more I could reach for in life, and I wanted to do that for others so I came back as an Aspirnaut™ mentor and resident counselor for high school students. People need someone to believe in them. I would never have gone to Vanderbilt—and I wouldn't be going to Yale—if it weren't for Drs. Billy and Julie Hudson and Dr. Ela Knapik, my principal investigator.

3. During your gap years, how did you prepare yourself for your future?

I was a Research Assistant for two years in Dr. Ela Knapik's laboratory. By taking two gap years, I had time to dive deeper into my project and truly think for myself. Plus, I worked in the same lab for six years (four years as an Aspirnaut™ intern and two years as a Research Assistant) and was able to build enough trust with the lab to push a project along myself. I chose to do a gap year because working long-term, full-time in a lab is just a more in-depth experience than working part-time through the semester or even full-time in the summer. My gap time has built my confidence in science, has given me the chance to develop my scientific writing abilities, and has allowed me to ground myself outside of a classroom before starting my next step.

4. You just got accepted to Yale; how did that feel?

I was at work when a notification came up on my computer from a name I didn't know. I honestly thought it was spam, and I opened it so I could delete it. When I saw "Congratulations!" I was taken aback, and I read through the email twice. I still wasn't sure it was real, so I logged onto my Yale application portal and confirmed I had gotten in. My heart was hammering, but I kept a straight face and told my lab-mates I was stepping in the hall for a minute. I called my mom, and as soon as I said the words out loud, I started sobbing. It is a dream come true to get into my top choice program, and it's impossible to describe how excited I am.

5. What advice would you give a high school student interested in pursuing their M.D./Ph.D.

Get involved with research early! First of all, getting into and completing M.D./Ph.D. training is one of the hardest and longest career pathways. Make sure it's right for you and that you are doing it for the right reasons. Second, you need to show serious potential and commitment to research to have a successful application. Spend time reflecting on why you want to pursue a career, and back up your motivations with actions. Shadow, volunteer, do research...Do this no matter what path you decide to take, particularly to others who come from disadvantaged backgrounds, I want to emphasize: do not count yourself out too soon. Yes, it's hard, but it's attainable. Don't think of what is or isn't too difficult to do, think of what you want to do. Some professors told me my grades weren't good enough to get into an MD/Ph.D. program, and I got into several—including Yale. Always remember that there's more to you than a transcript. Be realistic about how you reach your goal, but don't limit that goal based on others' negativity.

6. What are your future goals and aspirations?

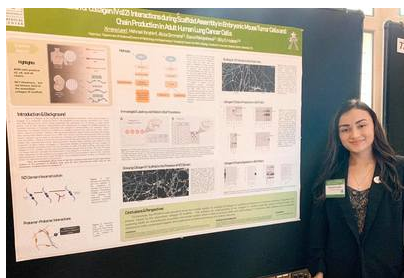
With my future M.D./Ph.D. degrees, I aspire to be a physician-scientist. Ideally, most of my time will include conducting research. Practicing medicine will help fuel my research because of the personal and clinical perspective I can bring to my work. As for what field of medicine, who knows! There are so many doors wide open, and I know there are even more doors to discover. I'm excited to start my training and find my scientific passions.



New Publication!

Congratulations Haley Harington on your first first-author publication in *The Journal of Biological Chemistry*. Haley is a five-time Aspinaut™ intern and Ph.D. candidate in Biochemistry at Indiana University. Her research focuses on the "Cotranslational Folding Stimulates Programmed Ribosomal Frameshifting in the Alphavirus Structural Polyprotein."

Read the full publication [HERE](#)



2020 Goldwater Scholar

Ximena Leon, a 2019 Aspinaut™ intern, was named a 2020 Goldwater Scholar. Ximena is currently studying biology at the University of Tennessee, Chattanooga. The Barry M. Goldwater Scholarship is one of the most prestigious undergraduate scholarships for students studying the natural sciences in the United States.

DONATE NOW

If you are interested in getting involved or sponsoring an Aspirnaut™ high school experience, please contact Rachel Baugh @ rachel.baugh@vumc.org.



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