

ASPIRNAUTS

LANDING ON CAMPUS THIS FALL



Billy Hudson, Ph.D., and Julie Hudson, M.A., M.D., flank incoming freshmen Domonique Bragg, Richard Harris and Cody Stothers

BY LESLIE HILL

After getting a small taste of Vanderbilt during their summers in the Aspirnaut Initiative, three students have decided to take a bigger bite of the University this fall as undergraduates.

Domonique Bragg, Richard Harris and Cody Stothers were high school students from rural Arkansas selected for a project to elevate science and math achievement among students in rural communities. Now they are rising freshmen at Vanderbilt. "I want people to know that students in rural Arkansas have full capabilities," Bragg said. "The Aspirnaut program pulls in students who probably would have been looked over but have a lot of good talent."

The Aspirnaut Initiative is directed by Julie Hudson, M.D., assistant vice chancellor for Health Affairs at Vanderbilt, and was co-founded by Billy Hudson, Ph.D., professor of Medicine and director of the Vanderbilt Center for Matrix Biology. The program was started in rural Arkansas where Billy Hudson was born and raised.

"Aspirnaut" is the term the Hudsons coined for students who aspire, seek and achieve.

The program focuses on science, technology, engineering and mathematics (STEM) education and reaches students in underserved rural areas who often have long bus rides to school, which the program capitalizes on with laptops and online course work. It also offers videoconferencing of hands-on science labs, accelerated and AP online courses, exposure to STEM careers and professionals, college guidance

“Our vision of the Aspirnaut program is as a K-20 STEM pipeline that affords the opportunity for rural students to enter a STEM profession,” said Julie Hudson. “Intelligence is distributed randomly, but very few talented rural students enter STEM careers. At a time when it is estimated that at least 50 percent of the jobs in the next decade will be STEM-related and will require at least some education past high school, it only makes sense to enhance and accelerate the STEM education of rural students. These students also live in regions where the local economies are seeing a loss of jobs. By enhancing STEM education in these areas, we are also providing a pathway for students to not just have jobs, but to have good-paying ones for which they have passion.”

Last summer, Billy Hudson invited the Aspirnauts into his lab as he researched a chemical bond throughout the animal kingdom. They returned this summer for more research and to present their results at a daylong symposium.

“What you learn in high school is just the tip of the iceberg,” Stothers said. “I’ve learned from my research at Vanderbilt that big discoveries are not made every day. Research is so super-specific that from the outside it looks so narrow and unimportant. But each little step is important.”

Stothers said he knew from the second day of 10th grade that he wanted to be a doctor, and his time as an Aspirnaut has only reinforced that decision. “This has been the best experience of my life, and I wouldn’t trade it for anything,” he said. “We were well-supervised in the labs, but they made us feel like we were doing the work. And they definitely let us mess up.”

Harris learned an important lesson in patience. “Results may take hours or days, and those results may be right only 5 percent of the time,” he said. Because he wants results now, not years from now, Harris said he won’t be a researcher, but he values his time as an Aspirnaut. “I liked the program so much, I only applied to Vanderbilt,” he said.

Bragg has always had her sights on being a dentist, but her time as an Aspirnaut opened her up to new ideas in the field. “I was able to talk to dentists about other aspects of the career, like policy or research. I knew I always wanted to be a dentist, but I didn’t know there were so many options,” she said.

The three incoming freshmen will have a big leg up on their peers when classes begin this fall. They have already spent weeks at Vanderbilt doing hands-on research, learned their way around campus, gotten to know faculty and student researchers, and even met potential mentors.

“The Hudsons have invested more in me than I ever would have invested in myself,” Stothers said. “They put a lot of faith in high school kids. Our hope is that the Aspirnaut program functions to shine a light on career and educational pathways that few rural students know about,” Billy Hudson said.

When they begin their undergraduate classes this fall, these three students will be well on their way.