

NEWS

APSU's Sheila Johnson returns to Aspirnaut program

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Nashville, Tenn. – Leaders in the Nashville business community were invited this week to meet some of the best and brightest science students from around the globe as part of a series of tours of the Aspirnaut research facility at Vanderbilt University Medical Center.

The students are part of the 7th annual Aspirnaut summer internship program where they conduct intense, hands-on research and attempt to make groundbreaking scientific discoveries.

“Here, we put great value on the business of math and science,” said Billy Hudson, scientific director and co-founder of Aspirnaut, and Elliot V. Newman, professor of Medicine; Biochemistry; and Pathology, Microbiology and Immunology director of the Center for Matrix Biology. “Our program is based on discovery. We take a textbook and we throw it on the floor. Instead of looking in a book, we help students learn to ask questions.”

Aspirnaut Sheila Johnson will be a junior at Austin Peay State University in the fall. She is majoring in chemistry and plans to pursue PharmD/PhD degrees after college. She would ultimately like to be a cancer researcher.

“Most breast cancer chemotherapy treatments target either estrogen, progesterone or HER 2 receptors, but triple negative breast cancer does not express any of these genes,” Johnson said. “This makes it a difficult type of breast cancer to treat with chemotherapy treatments. I would like to work on developing more effective treatment, while also conducting clinical trials with women in all stages of triple negative breast cancer.”

This is her second summer as an Aspirnaut summer research intern at Vanderbilt University Medical Center. “I am interested in being a part of the Aspirnaut program because I love discovery. I love being challenged with a mystery and asked to solve it. This is why I love science.”

Johnson feels that she has gained critical thinking skills and has learned to approach problems from different perspectives through her participation in the program.

“Over the past year I have had the opportunity to spend a great amount of time working in a lab,” she said. “Having worked in Dr. Zutter’s lab, I have learned a number of skills that I am sure many students my age do not possess. I am challenged on a daily basis. I know what I am working on could eventually lead to helping someone years later. That makes me feel like I am part of something worthwhile.”

She is also interested in mentoring other students. Johnson participates in the Austin Peay Chemistry Club, which provides opportunity and encouragement for middle and high school students who wish to pursue a career in STEM (science, technology, engineering and mathematics).

The Aspirnaut program involves students who would not otherwise have such opportunities to explore interests in math and science. These students are from diverse backgrounds and many are from rural areas.

“I look at these students as the forgotten students,” Hudson said. “Giving these students an opportunity is a critical component of our program.”

Aspirnaut is a K20 STEM pipeline for diversity. The program involves two main components: “beaming” of STEM labs to elementary and middle schools in rural America, and summer research internships for diverse high school and undergraduate students. Participants are supported by individual career development, mentorship by STEM professionals, college preparation and a university partnership. It is a model that could be replicated by other major universities to connect opportunity to the “Forgotten Student.”

For more information about Aspirnaut, visit aspirnaut.org.
