

# Aspirnaut education program reaches decade mark

 [news.vumc.org/2019/08/29/aspirnaut-education-program-reaches-decade-mark/](https://news.vumc.org/2019/08/29/aspirnaut-education-program-reaches-decade-mark/)



Aug. 29, 2019, 9:06 AM

by *Bill Snyder*

Ten years on, a unique summer research program at Vanderbilt University Medical Center designed primarily for rural high school students with limited resources is achieving its goal of increasing the diversity of the nation’s scientists and engineers.

All 119 “aspiring voyagers” who have participated in the “Aspirnaut” program to date have graduated from high school. Ninety-five percent have gone on to college, the program’s founders, Julie Hudson, MD, MA, and Billy Hudson, PhD, reported this month in *Nature Reviews Nephrology*.

Eighty-eight percent of those students are majoring in STEM subjects (science, technology, engineering and math), far exceeding available national rural norms. Of 39 college graduates to date, 19 have entered the STEM workforce, three are in graduate school, two have begun medical school, and two are pursuing combined MD/PhD degrees.

Training in and entering well-paying STEM careers can help reverse income inequality and lack of mobility experienced by certain racial and ethnic groups and those of low socioeconomic status. Yet fewer than 15% of US students from these underrepresented groups who start college as STEM majors complete this degree.

The Aspirnaut program is showing one way to achieve that goal. It is a “pipeline,” the Hudsons conclude, “populated with talented, motivated students from rural America who are not on the usual recruitment radars for STEM programs.”

Billy and Julie Hudson, who are husband and wife, began working with students in an underserved, rural part of central Arkansas, where Billy Hudson grew up, in 2006-2007.

Billy Hudson, the program’s scientific director, is the Elliot V. Newman Professor of Medicine at the Vanderbilt University School of Medicine and director of the Vanderbilt Center for Matrix Biology. Julie Hudson, the program’s executive director, is Vice President for Medical Center Relations at VUMC and an anesthesiologist by training.

With the receipt of a grant (DK065123-07S1) from the National Institute of Diabetes and Digestive and Kidney Diseases, the Aspirnaut program was able to begin high school summer research internships at VUMC in the summer of 2009.

The students work full time in a laboratory on a discovery science project for six weeks with the goal of generating original data. Over the past 10 summers, they have co-authored more than 24 scientific publications, several of which have advanced the field of knowledge in kidney disease and diabetes.

The students also are tutored in professional skills including scientific communication, responsible conduct of research and developing long-term relationships with mentors, skills that will serve them well when they enter their STEM professions.

They participate in guided self-discovery including group sessions led by a clinical psychologist, individual career-planning sessions, and college and financial aid planning. “With mentorship, participants achieve milestones they did not think possible,” the Hudsons write.

Last year the University of Michigan Life Sciences Institute in Ann Arbor became the first university to replicate the Aspirnaut model.

“We challenge other universities to join us,” the Hudsons concluded. “Many talented individuals are waiting to be matched to an incomparable opportunity that will change their lives and the lives of generations to come.”