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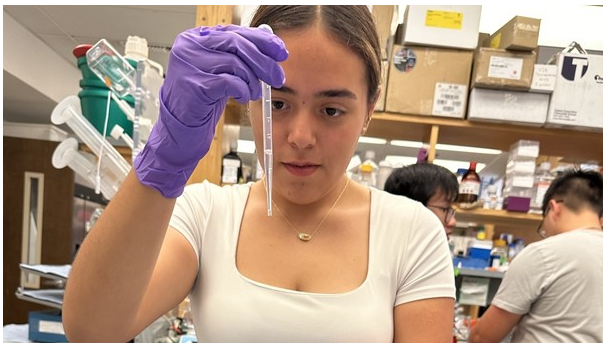
ASPIRNAUT™

Editor: Rachel Baugh Smith

Photo: Erin

Summer Research Program 2025

We are excited to welcome the 2025 Aspirnaut™ Summer Research Interns. They include 19 Lu-Springer High School Research Scholars from 12 states and 11 undergraduates from 9 states, Saipan, and Kazakhstan, who will train under the guidance of 25 mentors for a summer of discovery science, professional skills development, and wellness training. Welcome, 2025 Aspirnauts!



Meet the 2025 Lu-Springer High School Research Scholars

**indicates returning Aspirnaut™

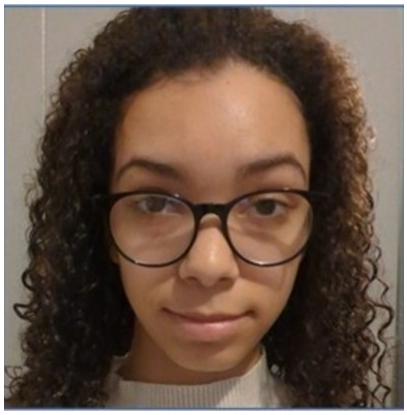
Christina Adolphe
Burlington, Vermont

Michael Cantrell**
Wynne, Arkansas

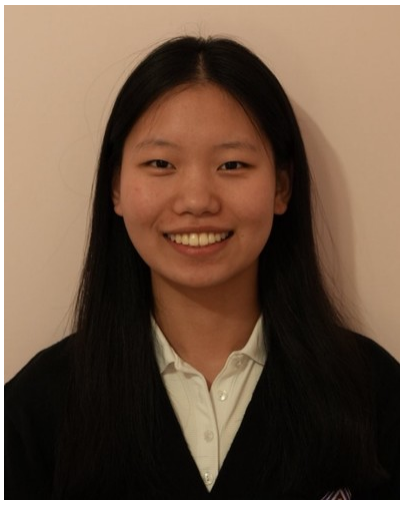
Madison Foster
Winnfield, Louisiana

Abbie Grant**
Burlington, Vermont

Scarlett Hale
Crockett, Virginia



Laklee Howell-Hill**
Hickory, Mississippi



Corina Huang
Statesboro, Georgia

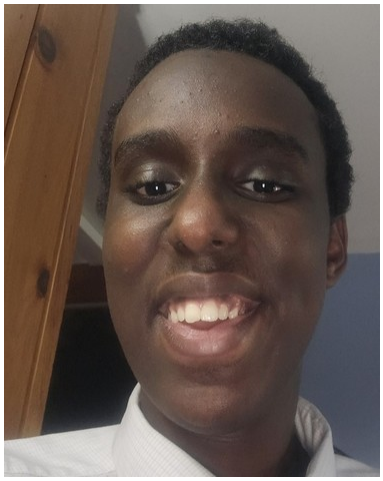
Ruby Isenhart**
Grant, Michigan

Brian Jackson
Huntsville, Alabama

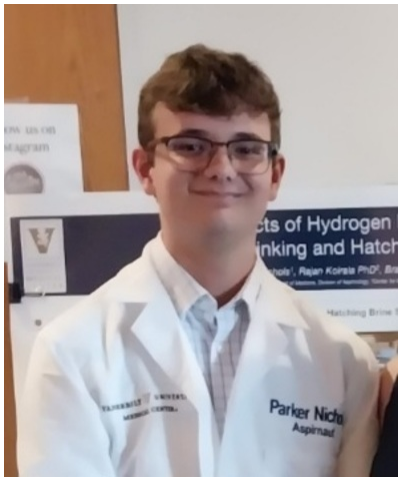
Jason Khang
Saint Paul, Minnesota

Precious McGee
Marks, Mississippi

Olivia Meihofer
Columbia, South Carolina



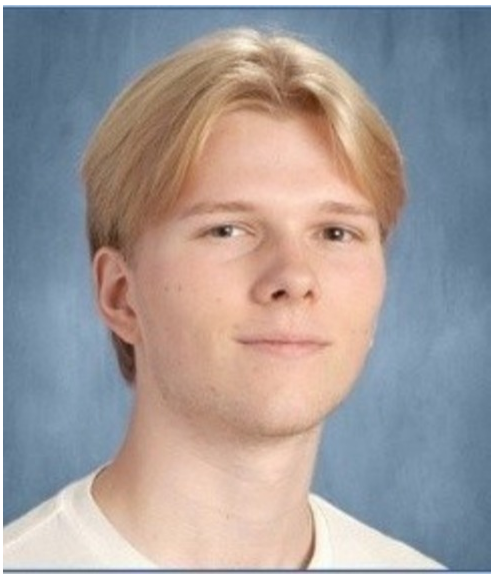
Hamdi Mohamed
Lewiston, Maine



Parker Nichols**
Wynne, Arkansas

Russel Paulino
Wynne, Arkansas

Kaw Paw
Saint Paul, Minnesota



Max Reif
Burlington, Vermont

Arman Sadri
Titusville, Florida

Samantha Secor
Winooski, Vermont

Meet the 2024 Undergraduate Research Interns

**indicates returning Aspirnaut™

Ryan Anderson**
Tulsa, Oklahoma
Bethune Cookman University

Karen Escobar-Salgado**
Knoxville, Tennessee
Vanderbilt University

Kimberly Hoang**
Portland, Oregon
Berea College

Emma Meihofer**
Columbia, South Carolina
Johns Hopkins University

Colton Miller**
Wynne, Arkansas
Belmont University

Bogdan Miranov
Almaty City, Kazakhstan
Berea College

Maggie Patterson
Leland, Mississippi
Tougaloo College

Farid Saldivar
Lebanon, Tennessee
Cumberland University

Jalen L. Smith**
Dayton, Ohio
Tennessee State University

Eun Jun Wang**
Berea, Kentucky
Berea College

Featured Student: Sariah D'Empaire

Photo by Harrison McClary/Vanderbilt University

Sariah was a 2021 Aspirnaut™ participant and has been accepted into the Interdisciplinary Materials Science Ph.D. program at Vanderbilt University's School of Engineering. She is currently working in the lab of Tonia Rex, Ph.D., which was recently featured in the *VUMC Reporter* for its collaboration with the U.S. Combat Capabilities Development Command Army Research Laboratory and the Civil Militray Innovation Institute.

1. Tell me a little about your background and upbringing.

I am of Afro-Latin heritage, with Haitian and Venezuelan roots, and was raised in Port Charlotte, Florida. From an early age, I exhibited an intense curiosity about the mechanics of the world around me, which was nurtured by supportive mentors and educators who encouraged my academic pursuits. Despite facing challenges in my environment, I remained actively engaged in extracurricular activities, serving as senior class president and participating in various sports. This dedication led to earning a collegiate-level track and field scholarship.

2. What sparked your interest in science at an early age?

My passion for science was ignited during childhood, fueled by a fascination with *National Geographic Kids* and hands-on experiences with science fairs and experiments in elementary school. These early exposures cultivated a deep-seated enthusiasm for scientific exploration.

3. What made you choose an internship with Aspirnaut™?

I applied to the Aspirnaut™ program recognizing the necessity of a research internship to advance my medical aspirations. This opportunity not only fulfilled that requirement but also broadened my perspective on the possibilities within my field. Aspirnaut™ opened up the world of possibilities.

4. You mentioned having to overcome challenges in your environment. Do you mind sharing more?

Experiencing the loss of family and friends and navigating life independently at a young age presented significant challenges. These experiences, however, underscored my resilience and inner strength, shaping the person I am today.

5. You are working on groundbreaking research; tell me more about what you are working on in the Rex Lab.

My current research focuses on bridging science and innovation by studying the effects of blast exposure on brain and eye health in military personnel. Our team has developed a sophisticated

model of the human head and brain that emulates the response of actual human tissue to force. This model is equipped with advanced sensors to measure acceleration and strain in critical areas, including the eye, optic nerve, and brain.

6. What goals have you set for your future?

I choose not to set definitive limits on my dreams and aspirations, as personal and professional growth continually unveil new opportunities and possibilities. Pursuing an engineering degree has allowed me to be creative and innovative, expanding my understanding of what is possible. Coming from a small town and college, I was initially unaware of the vast opportunities available. Now, as an inventor embarking on my Ph.D. program, I am continually amazed by the unforeseen outcomes and prospects that have emerged along this journey.

7. Where do you find your motivation?

The desire to make a meaningful difference for my family, friends, and community is my primary motivator. Reflecting on the progress I've made thus far reinforces my determination, as I recognize that this journey is only the beginning.

View VUMC Reporter Article **HERE**

Congratulations on your Thesis Defense

- **Kateryna Nabukhotna** is a two-time Aspirnaut™ participant who completed her Ph.D. in biochemistry at Vanderbilt University in March. As a member of the Borden Lacy lab, Kateryna's research focused on understanding the role of *C. difficile* transferase toxin in *C. difficile*-induced inflammation and pathogenesis.. She earned her undergraduate degree in chemistry from Berea College in 2019. Kateryna plans to puruse a postdoctoral research fellowship.
- **Seth Reasoner** is a three-time Aspirnaut™ participant who completed the Ph.D. portion of his M.S.T.P. program at Vanderbilt University School of Medicine in March. Seth was a member of the Maria Hadjifrangiskou Lab in the Department of Pathology, Microbiology, and Immunology, where he studied urinary tract infections through the lens of the urinary microbiome. Seth earned his undergraduate chemistry degree from Berea college in 2018. He has one more year of medical school, and plans to apply to internal medicine residency programs followed by a digestive diseases fellowship.

Kateryna Nabukhotna
Vanderbilt University

Seth Reasoner
Vanderbilt University School of Medicine

Thank you to our generous investors whose support makes this program possible.

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If you would like more information on how to get involved with Aspirnaut™, please contact Rachel Baugh @ rachel.baugh@aspirnaut.org