

UNDERGRADUATE RESEARCH

Summer Research Scholar Tests Effectiveness of Sunscreens, Gains Lab Experience for Future Career

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Virginia ‘Ginny’ Merrill, ’23, Plans to Attend Graduate School, Work in Cosmetic Chemistry

The Gardner-Webb University Summer Undergraduate Research Scholars Program gives students like Virginia “Ginny” Merrill, of Charleston, S.C., experience that will lead to future discoveries in their careers. Merrill, a chemistry major and French minor, plans to graduate in 2023, attend graduate school and work in cosmetic chemistry.

She was one of eight scholars who received a research grant to pursue an academic interest, staying on campus for five weeks. While guided by a faculty mentor, the scholars worked 40 hours a week on their projects. They are required to publish their research or present their work in a professional forum, such as GWU’s Life of the Scholar Multidisciplinary Conference.

Merrill chose to research the photo-protective ability of commercial sunscreens. “This interested me because sunscreen protects skin against damaging effects of UV rays from the sun, including skin cancer,” she shared. “I was shocked at what I found while doing background research into the topics, and I think that I learned so much in such a short time from researching not only the specifics of my experiments, but also the background information. I think that this experiment, though tough, helped me to not only learn more than I would in a classroom, but also to learn more about myself.”

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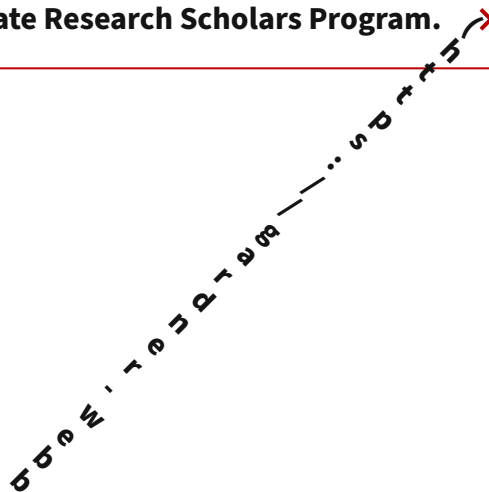
Her mentors, Dr. Stefka Eddins, professor of chemistry, and Susan Manahan, assistant professor of biology, offered guidance and encouragement. “I have been working on a project that’s interdisciplinary, and it really helped that both of them were more specialized in different areas,” Merrill offered. “They have taught me a lot, including that, ‘no data is still data.’ This phrase absolutely stuck with me as the data I obtained was not what I expected. The data may be different than what I wanted or expected, but it provides new information I can understand and use.”

She used a UV-VIS spectrophotometer to scan the absorbency levels of sunscreens. Baker’s yeast was her model system for human skin when exposed to sunlight before and after sunscreen is applied. One of the challenges she had to overcome was how to test spray-on sunscreens. “The yeast was too concentrated to successfully conduct the model system experiment as well, so I have to continue to do trials,” she noted.

Merrill said other students should definitely talk to a professor and take advantage of the invaluable opportunity, and she advised them to be patient in their pursuit of results. “I would also say take time to focus on yourself as well,” she asserted. “It may be hard to find a stopping point, but you should make sure you don’t overwork yourself.”

Located in the North Carolina foothills, Gardner-Webb University is a private, Christian, liberal arts university. Gardner-Webb emphasizes a strong student-centered experience and rigorous academics to prepare students to become effective leaders within the global community. Ignite your future at Gardner-Webb.edu.

Learn more about the GWU Summer Undergraduate Research Scholars Program.



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