

# Promising discoveries

## Microbiology student does research to fight cancer, gain experience for future in medicine

By Marcia Locke

One of Kansas State University's most promising students is working to shrink cancerous tumors. Davanté Hammer, a senior from Scandia, Kansas, majoring in microbiology and pre-medicine with a minor in business, does immunology research that could someday help fight melanoma, a deadly skin cancer.

Hammer works with Sherry Fleming, professor of biology, to understand how melanoma grows and how to decrease tumor growth. He uses special peptides created by Fleming to control immune cells that play a role in the body's response to cancer and other threats. Peptides are short chains of amino acids, which are molecules that form proteins. Fleming's peptides, modified from a normal blood protein, slow tumor growth in mice by changing the blood vessels and possibly the white blood cells in the tumor.

Hammer got involved in this research after working with Fleming on a business project for his minor. With support from an entrepreneurial scholarship from the Kansas IDeA Network of Biomedical Research Excellence, he wrote a business plan to license her peptides to a pharmaceutical company when ready. Fleming was impressed by Hammer and invited him to work in her laboratory.

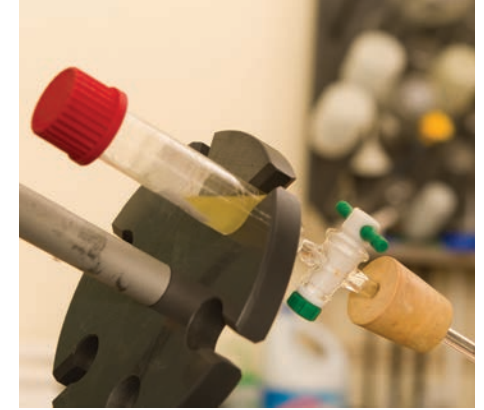
Getting involved in research has benefited Hammer in many ways.

"Through my work in the lab, I've been able to learn more about the role research plays in understanding science and health care, as well as many unique research techniques," Hammer said. "I'm currently learning new lab techniques that are being used to fight COVID."

Research experience will help Hammer achieve his educational and career goals. He wants to go into sports medicine and is currently applying to medical schools.

"Doing research has allowed me to see the comparison between health care and research, and to develop better skills for planning ahead and learning how to do experiments and follow certain protocols," Hammer said.

Hammer received a Cancer Research Award from the Johnson Cancer Research Center in fall 2021. He appreciates that it allows him to focus on research instead of having to work outside of school. He also received a 2021 Division of Biology Most Promising Student Award.



"Most students in my lab have the interest and scientific ability to do the job, but Davanté stands out because of his excellent time management, self-motivation and reliability," Fleming said. "In addition, despite not having had a class on the immune system, Davanté took it upon himself to learn about the cells we work with."

Hammer also recognizes other positive influences in his life. He feels fortunate to have a supportive mother and family, he said. And he credits his

high school science and math teachers for getting him interested in science and pushing him to work hard and better himself as an individual.

His research experience has been meaningful in other ways as well.

"I'm able to see how the novel peptides I work with could play a role in fighting cancer in the future, and that's pretty cool to be a part of."



**44** undergraduate students co-authored scientific publications in the past 5 years.