

# Going far with K-State

## Biology alumnus helps cure rare diseases

By Marcia Locke



Scott Rottinghaus, M.D., grew up in the small town of Westmoreland, Kansas, about a half-hour north of Manhattan, home to Kansas State University. When it came time for college in 1991, K-State was an easy choice. Although he didn't go far for college, his K-State education took him far in life.

Rottinghaus is now vice president and head of clinical development for hematology and nephrology at Alexion Pharmaceuticals, AstraZeneca's rare diseases unit. He first joined the pharmaceutical industry with Pfizer in 2007 after working as a physician for several years. He also continued seeing patients as an assistant clinical professor at Yale University from 2008 to 2019.

At K-State, Rottinghaus majored in biology and classics, with a vision to attend medical school. One day early in his freshman year, he asked his biology professor, Richard Consigli, if he could join the Consigli lab to learn more about basic research.

Before long, Rottinghaus was studying polyomavirus, a virus that causes cancer in mice, in the Consigli Lab. He cloned and characterized its structural proteins. He also had the opportunity to have his experiments flown on the space shuttle to see how viruses assemble in microgravity.

Joining a lab proved to be a great step in Rottinghaus' educational journey. He published articles in scientific journals, participated in a National Institutes of Health summer research program, won a Marshall scholarship to pursue a master's degree in biology at Cambridge University, and was recognized by USA Today.

To support his laboratory research experience, which he says was transformative, Rottinghaus received three Cancer Research Awards from the Johnson Cancer Research Center.

"The Cancer Research Award really made a difference for me because it allowed me to focus on research with less concern that I needed to get a job on the side," he said. "And the experience not only set me up for success in graduate school, where I studied DNA repair, but it also set me up for my future pathway and career in science."

Rottinghaus's medical school dreams came true. He earned his degree from Mayo Medical School and did his internal medicine residency at the Mayo Clinic in Minnesota. While there, he studied vaccines for viruses like Hepatitis B and measles. Later, he would also work with HIV and influenza vaccines.

Now, with more than 20 years in medicine and pharmaceuticals, Rottinghaus is helping Alexion develop medicines to treat rare diseases.

"It's exciting to do something nobody's done before and to help a person who hasn't had any help before," he said.

"Dr. Consigli really inspired me to an early career in basic research that has led to a longer career in medicine and clinical research," Rottinghaus said. "His interest in virology, which he instilled in me, inspired me to pursue infectious diseases as a medical subspecialty. I love patient care, but I figured out I wanted to cure people's diseases through scientific research, and I really like it."

Outside of work, Rottinghaus stays busy with his wife, Catherine, and seven children ranging in age from 2 to 21 years old. He is also active in numismatics, the study of coins and other currency, and has served three terms as governor of the American Numismatic Association. In 2021, he joined the Johnson Cancer Research Center's Advisory Council.

**\$200,000**

a year is dedicated to training students to do scientific research.

