College of Agriculture's Graduate Student of the Month
November 2022

Zhenjiao Du

Hometown-Jingmen, Hubei, China

—*PhD in Ag Grain Science & Industry under the direction of Dr. Yonghui Li*

—*Expected Graduation December 2024*

Getting to know Zhenjiao:

What do you do in your free time?

Sleep or watch drama, sometimes read history books or novels.

What is your favorite place to eat in Kansas?

Tasty China House and Old Chicago

What are your future career plans, what's next?

A researcher employs bioinformatics to boost agricultural products utilization

Zhenjiao's Research:

Food-derived bioactive peptides (FBPs) are mainly produced from the enzymatic hydrolysis of proteins. They have exhibited diverse bioactivities, e.g., antioxidant, antihypertensive, antidiabetic, antimicrobial, etc., and attract growing interest since the demand for natural nutraceuticals, concerns over the safety of synthetic products, sustainability, and, most importantly, FBPs' diverse bioactivities to relieve metabolic disorder health burdens. My research is to use advanced bioinformatics approaches (quantitative structure-activity relationship modeling, molecular docking, and molecular dynamics simulation) to accelerate high-activity peptide discovery and bridge the gap between wet chemistry studies and computer calculation for FBPs production. The final goal of the research is to reasonably design bioactive peptide production from specific agricultural products for value-added utilization. The study will further contribute to customized nutrition recipe design for special populations.