FACULTY DEVELOPMENT ENDOWMENT FUNDS

Faculty Research Fund

Award Date: Spring 2018

Proposal Title: Innate Immunomodulatory Arabinoxylan Oligosaccharides from Arkansas Rice Bran Fiber.

Principal Investigator: Brett J. Savary

College of Agriculture

Department of Agriculture

ABSTRACT

The proposed study will interface Arkansas agricultural research with human (and animal) health implications, with research outcomes directly relevant to addressing gut inflammatory diseases through dietary intervention. Soluble arabinoxylan and oligosaccharides present in rice bran fiber are hypothesized to modulate innate immune responses to inflammation and pathogens. The experimental objective is to isolate arabinoxylan oligosaccharides from two distinguished sources, a rice bran nutraceutical product and an Arkansas-specific rice cultivar. Technical capacity for achieving the experimental objective is documented. Student engagement in research and training is a central focus of the research plan, and it is critical for maintaining ongoing research capability. Unique arabinoxylan oligosaccharides purified in this study will be available for investigating their innate immunological activity. Dissemination of knowledge and new materials generated from this seed project will promote the PI's recognition in the rice research community, enable collaborative contributions, and support competitiveness for a subsequent research grant proposal to USDA-NIFA AFRI (Function and Efficacy of Nutrients program).