ARS Office/Lab and Location: A research opportunity is currently available in the Mycotoxin Prevention and Applied Microbiology (MPM) Research Unit, National Center for Agricultural Utilization Research (NCAUR), Peoria, Illinois. The Agricultural Research Service (ARS) is the U.S. Department of Agriculture's chief scientific in-house research agency with a mission to find solutions to agricultural problems that affect Americans every day from field to table. The goal of the Mycotoxin Prevention and Applied Microbiology (MPM) Research Unit is to enhance food safety by conducting research to develop strategies to control fungal disease in cereal crops and eliminate the risk of harmful fungal contaminants in food and feed.

Research Project: The participant will conduct research to understand the impact of climate change on mycotoxin contamination of cereal grains. The specific project objective will be to evaluate the impact of elevated carbon dioxide on the production of Fusarium graminearum secondary metabolites, mycotoxins, and mycotoxin derivatives during growth on wheat and barley grains with varying protein and carbohydrate content. The participant will be involved in developing nuclear magnetic resonance NMR based metabolomic analyses to detect and quantify Fusarium metabolites. MPM scientists conduct research in genetics, microbiology, chemistry and plant pathology to produce information and technologies to enhance food safety and crop production in the U.S. and around the world.

Contact Dr. Martha Vaughan (martha.vaughan@usda.gov) for additional information.