Dr. Bing Wang, a candidate for Assistant Professor in the Division of Environmental Health Sciences, will present a seminar entitled “Application of Quantitative Risk Assessment in Food Safety Decision Making.” Dr. Wang is a post-doctoral research fellow in the Department of Nutrition and Food Science at the University of Maryland. She received a Ph.D. in Veterinary Microbiology from Iowa State University, and a M.S. in Veterinary Pharmacology and Toxicology from China Agricultural University in Beijing.

Abstract:
Quantitative risk assessment (QRA) is being increasingly used to provide sound food safety advice to risk managers. Food safety risk assessment predicts the likelihood of harm resulting from exposure to microbial and chemical agents in the diet and supplies scientific evidence for the development of standards, guidelines and recommendations for food safety.

Two case examples will be presented to show the application of QRA in food safety. 1) Should the removal of swine deep tissue lymph nodes be considered as a potential intervention at processing plants in order to mitigate the risk of salmonellosis due to consuming ground pork? 2) Is it safe for the whole population in the US if folic acid fortification is extended into masa flour to further decrease the risk of neural tube defects in the Mexican American population? To answer these questions, a microbial risk assessment and a nutritional risk benefit analysis following the chemical risk assessment framework were established. Details and results will be discussed.

Environmental factors are very essential in passing the risk imposed by hazardous agents along the food production chain. QRA could be a very useful tool to link the potential risk contributing factors from environmental sources with public health, therefore determining the key points for the implementation of hazard mitigation and food safety risk management.