Project Title:

Development of a Standardized Method for Detection of *Cyclospora cayetanensis* in Soil Samples

Principal Investigator

Dr. Sonia Almeria, US Food and Drug Administration

Public Disclosure Abstract:

There are significant gaps in our knowledge of the epidemiology of *Cyclospora cayetanensis*; the potential of fecal contaminated soil as a source of food contamination needs to be considered. There is no standardized FDA method for detection of this parasite in environmental soil samples. In this project, we will develop a method to detect *C. cayetanensis* oocysts in soil. If soil is contaminated with *C. cayetanensis* there is a possibility that the oocysts may contaminate food, which might result in outbreaks of cyclosporiasis. This research should improve the ability of the FDA to detect *Cyclospora cayetanensis* in soil.

Project Title:

Evaluation of the FDA BAM Method for Detection of *Cyclospora cayetanensis* in Complex Matrices Linked to Outbreaks of Cyclosporiasis

Principal Investigator

Dr. Sonia Almeria, US Food and Drug Administration

Public Disclosure Abstract:

The *Cyclospora cayetanensis* detection method described in the FDA Bacteriological Analytical Manual (BAM chapter 19b) has not yet been used to evaluate the many fresh produce and prepared side dishes that could serve as vehicles for cyclosporiasis outbreaks. Methods, such as this, may not perform well in all food categories, particularly those of complex composition. In this study, we will evaluate approaches to improve the detection of *C. cayetanensis* in prepared dishes that were implicated in past outbreaks. This research should improve the ability of FDA to detect *C. cayetanensis* in foods and will assist FDA to identify necessary control measures to improve food safety.

Project Title:

Microbial survey of FDA regulated foods, agricultural water, and cosmetics

Principal Investigator

Dr. Mauricio Durigan and Dr. Alex da Silva
Contract Project Officer, Guodong Zhang; US Food and Drug Administration

Public Disclosure Abstract

This project is intended to obtain baseline survey data on FDA-regulated food, agricultural water, and cosmetics products. These products shall be analyzed for the presence of and, in some cases, levels of, one or several pathogens, including, but not limited to, Salmonella, *Listeria monocytogenes*, *E. coli* 0157:H7, non-O157:H7 STECs, *Shigella* spp., *Campylobacter* spp., *Vibrio* spp., *Staphylococcus aureus*, *Bacillus cereus*, *Cronobacter* spp., Norovirus, hepatitis A, *Cyclospora*, and *Cryptosporidium*. This project shall support FDA's mission of protecting the

public health by generating baseline data regarding the microbiological safety of selected food, agricultural water, and cosmetics commodities.

Project Title:
Detection of Foodborne Parasites in Effluents of Wastewater Treatment Plants

Principal Investigator
Dr. Mauricio Durigan and Dr. Alex da Silva, US Food and Drug Administration

Public Disclosure Abstract
Foodborne intestinal parasites such as *Cyclospora cayetanensis* are responsible for large and complex foodborne outbreaks that impact the integrity of the U.S. food supply. The circulation of these pathogens in wastewater treatment plants (WWTP) is not fully understood and analyzing such samples could be essential to better identify potential sources that could play a role in the contamination of produce. This study will serve as a pilot for verification of the presence of intestinal parasites in effluents and effluents of WWTPs which could represent important sources of contamination of agricultural water used to irrigate crops.