

Dr. Maria Brandl

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Contamination of Produce with Enteric Pathogens: A New Paradigm About Plant-Microbe Interactions

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Maria Brandl received her B.S. in Plant Science from McGill University, Montreal, Canada and her PhD in Plant Pathology from the University of California at Berkeley. During her PhD work under the guidance of Steven Lindow, she studied the role of bacterial auxin synthesis in the epiphytic fitness of *Pantoea agglomerans*. In 1999, she joined the Produce Safety and Microbiology Research Unit at the ARS in Albany, CA, where she is now the Lead Scientist of the Plant-Microbe Interaction Project. This project focuses on the ecology of human enteric pathogens on plants. Research in her laboratory aims at identifying specific bacterial and plant factors that affect the colonization of leafy vegetables by *Salmonella enterica* and pathogenic *E. coli*, the most common bacterial etiologic agent of disease outbreaks linked to produce. Recently, she has used microarray technology to investigate the behavior of these pathogens during their association with other members of the plant natural microflora, such as plant pathogens, epiphytic fungi, and protozoa.



Selected Publications:

Brandl, M.T., and R. Amundson. 2008. Leaf age as a risk factor in the contamination of lettuce with *Escherichia coli* O157:H7 and *Salmonella enterica*. *Appl. Environ. Microbiol.* 74: 2298-2306.

Brandl, M. T. 2006. Fitness of human enteric pathogens on plants and implications for food safety. *Annu. Rev. Phytopathol.* 44:367-92.

Brandl, M. T., B. M. Rosenthal, A. F. Haxo, and S. G. Berk. 2005. Enhanced survival of *Salmonella enterica* in vesicles released by a soilborne *Tetrahymena* species. *Appl. Environ. Microbiol.* 71:1562-9.

<http://www.ars.usda.gov/pandp/people/people.htm?personid=10920>