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Written Comment on Public Meeting on *Listeria monocytogenes*

To Whom It May Concern:

Successful prevention of human foodborne listeriosis cases and outbreaks and improved control of food contamination will clearly require improved research, surveillance and extension efforts. During the last five years, a model system for a *L. monocytogenes* research, surveillance and extension program has been developed in the Northeastern US under the leadership of Martin Wiedmann and Kathryn Boor at the Cornell University Food Safety Laboratory. Participants in this program include the New York State Department of Health (NYSDOH), the New York State Veterinary Diagnostic Laboratory (NYSVDL), New York State Department of Agriculture and Markets as well as health departments in other regions and states including New York City and Connecticut. Through these collaborations we have developed an integrated surveillance program for human, animal, and food *L. monocytogenes* isolates. **This program has not only significantly contributed to the detection and tracking of the human listeriosis outbreak linked to the consumption of hot dogs and deli meats produced at the Bil Mar plant, MI, but has also been critical in the identification of a second cluster of human listeriosis cases (with a focus in Connecticut and New York City), possibly linked to the consumption of contaminated, imported Polish cheese.**

This Northeastern program is designed to integrate research, surveillance and extension. Currently, *L. monocytogenes* isolates from human, foods and animals are collected and characterized by molecular subtyping (including automated ribotyping and Pulsed Field Gel Electrophoresis). We already have assembled a collection of more than 300 human and more than 200 animal and food *L. monocytogenes* isolates. This collection includes all human isolates collected by NYSDOH since 11/96 and all animal isolates collected by NYSVDL since 1990. This database is a key resource describing the frequency of different DNA fingerprints among *L. monocytogenes* isolates from different sources. Further human isolates from a lyophilized collection of human isolates at the NYSDOH (covering isolates since approx. 1975) will also be characterized and included in this database if funds become available. Data from this collection can be used, and will be used, not only for surveillance purposes, but also for research applications. Programmatic research goals include (i) development of a transmission pathway model for *L. monocytogenes*, (ii) determination of whether virulence differences and host specificities exist for different *L. monocytogenes* isolates, (iii) monitoring for the emergence of new *L. monocytogenes* strains, and (iv) monitoring antibiotic resistance trends among *L. monocytogenes* isolates. Our publicly available *L. monocytogenes* collection also provides a critical resource for other researchers who need to obtain well characterized *L. monocytogenes* isolates for other research purposes, including pathogen survival studies and the development and validation of new and faster detection methods.

It is important to emphasize that this program does not compete with the existing PulseNet and FoodNet programs. Rather, this program represents a complementary strategy for food safety improvement which is unique because (i) it includes surveillance, **research and extension**, (ii) it

includes comprehensive surveillance of animal isolates, (iii) it is organized as a regional network which allows increased flexibility as compared to national programs, and (iv) it includes academia and state institutions. Beyond the current critical need for a focus on *L. monocytogenes*, this program provides the opportunity for comprehensive food safety programming that could rapidly address other emerging pathogens on an as needed basis.

We plan to further expand and strengthen this program by including additional academic researchers and agencies from other states in the Northeastern US. Cornell is part of the Northeastern Regional Food Safety Initiative (NERFSI), a Northeastern Research, Extension and Academic Program, which has been created by the deans and directors of the Northeastern region Land-Grant Universities in 1996. We are currently in contact with a variety of other researchers from NERFSI institutions who have expressed an interest in participating in this program (including Dr. Steve Knabel, Pennsylvania State University and Dr. Catherine Donnelly, University of Vermont). Furthermore, we are in the process of developing extension modules for this program which address (i) development of food plant sanitation and environmental testing protocols to improve control of *L. monocytogenes* and (ii) development of an improved system for providing consumers, and particularly, at-risk populations, with listeriosis prevention and recall information using the Cornell Cooperative Extension system and subsequently, extension systems in other states

The core of this program does not currently receive any specific federal funding, but, rather, is dependent on support from the operating budgets of the individual participating agencies and groups. Some projects related to this core program have received some federal support. For example the Food Safety Laboratory at Cornell currently has a project on "Detection and tracking of pathogenic *Listeria monocytogenes* in smoked salmon and in processing plants" funded by New York Sea Grant from 2/98 through 1/00.

We propose the expansion of integrated surveillance, research and extension programs like the one described above is necessary to successfully address the problems of human listeriosis and to minimize food contamination with *L. monocytogenes*. Specifically we propose the following steps:

- (i) USDA, FSIS and/or other government agencies or programs (e.g., the Food Safety Initiative) are urged to provide financial support to continue and expand the Northeastern *L. monocytogenes* surveillance, research and extension program under the leadership of the Cornell Food Safety Laboratory.
- (ii) The Cornell Food Safety laboratory should be funded to become the *Listeria monocytogenes* reference center (similar to the *E. coli* reference center at Pennsylvania State University)
- (iii) the Northeastern *L. monocytogenes* surveillance, research and extension program should serve as a model for development of similar programs in other regions of the US.

Sincerely yours,



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