The U.S.–EU Conference on Extension of the Salm/Enter-net Surveillance System for Human *Salmonella* and *Escherichia coli* O157 Infections[1]

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To help extend the European Union's (EU) Enter-net system for the surveillance of *Salmonella* and Shiga toxin-producing *Escherichia coli* (STEC)[2] to other countries, a conference was held on March 12, 1998, under the auspices of the U.S.–EU Task Force on Communicable Diseases. The conference was cochaired by James LeDuc (Centers for Disease Control and Prevention [CDC], United States) and Christopher Bartlett (Public Health Laboratory Service [PHLS] Communicable Disease Surveillance Center [CDSC], United Kingdom), who head the Task Force Working Group on Surveillance and Response. Attendees from countries outside EU (South Africa, Hungary, Canada, Japan, Poland, Australia, the Czech Republic, Latvia, and the United States) were invited to describe their countries' procedures for monitoring *Salmonella* and *E. coli* O157:H7.

Enter-net, which has superseded the EU's *Salmonella* surveillance system (Salm-net), is an example of "globalization in action." The network consists of the microbiologist in charge of the member nation's national reference laboratory and the epidemiologist responsible for national surveillance of foodborne diseases. A collaboration of epidemiologists and microbiologists working at the technical level, the network is not a regulatory organization. It includes participants from all 15 EU countries plus Norway and Switzerland, with a combined population of 380 million. Since 1994, Enter/Salm-net has detected 10 international outbreaks resulting from contaminated food or water, including one that involved an Israeli snack food contaminated with *S.* Agona and one due to *S.* Livingstone infection in visitors to Tunisia. Enter-net's objectives are to extend Salm-net monitoring to STEC, including *E. coli* O157:H7, as well as drug-resistant strains of *Salmonella*.

Enter-net participants are working toward a common set of laboratory protocols, including procedures for serotyping, phage typing, and toxin typing. They report disease cases to the international Enter-net database on a regular basis, through the Internet, by using standardized data fields. Every year, the participants from each member country attend a workshop to discuss technical issues and principles of collaboration. Potential conflicts addressed at workshops include ownership of data; confidentiality; outbreak control measures; and liability concerns (e.g., what happens when a food product is implicated by Enter-net as a vehicle of disease transmission). At the next workshop, which will take place in November 1998 in Denmark, Enter-net members will review protocols for collaborative field investigations.

U.S. representatives described U.S. procedures for surveillance of *Salmonella* and STEC, including procedures for antimicrobial resistance monitoring. While Enter-net relies largely on phage typing to define *E. coli* O157:H7 subtypes, pulsed-field gel electrophoresis (PFGE) is the primary *E. coli* O157:H7 subtyping method in the United States. In 1996, CDC initiated PulseNet, a national molecular subtyping network for tracking *E. coli* O157:H7. PulseNet is being expanded to include *Salmonella* and other foodborne pathogens. PulseNet currently includes 26 state and large city health departments and laboratories from the U.S. Department of Agriculture and the Food and Drug Administra-

[1]Summary presented at a satellite meeting, March 12, 1998.
[2]Previously known as verotoxin-producing *Escherichia coli* (VTEC).

tion. An electronic database at CDC will be accessible to all participating PulseNet laboratories and will include DNA patterns of foodborne pathogenic bacteria and epidemiologic information associated with these isolates. Like Enter-net, PulseNet requires that all reporting sites use harmonized laboratory methods and standardized reporting specifications.

Each month, Enter-net's coordinator, based at the Communicable Disease Surveillance Center, applies an automatic cluster-detection algorithm to detect international outbreaks. To make the best use of the algorithm, each country must supply Enter-net with retrospective data from at least 3 years. The United States has an analogous system, the *Salmonella* Outbreak Detection Algorithm (SODA), which analyzes data reported through CDC's Public Health Laboratory Information System (PHLIS). Some U.S. state health departments are beginning to use SODA to perform their own analyses for incident detection.

Over the past few months, Enter-net has begun to define the data that will be collected on isolates of *E. coli* O157:H7; the data will be incorporated in an international database similar to the one used for *Salmonella*. The network has also begun a survey of methods in use for antimicrobial resistance monitoring in its member countries.

Enter-net's goals for 1998 are to conduct an inventory of national laboratory practices related to the diagnosis of STEC and to antimicrobial resistance testing for STEC and *Salmonella*, perform a multicenter study in participating reference laboratories on the detection of drug resistance, upgrade the Enter-net database to include STEC and antimicrobial resistance testing, agree on an outbreak investigation protocol, pilot weekly on-line reporting, and hold a scientific workshop in Denmark in November 1998.

Formal invitations will be sent to non-EU countries that have expressed interest in joining Enter-net. Pilot data exchanges will be initiated in September 1998. If possible, new members will begin routine data exchange by early October and will attend the November workshop in Denmark.

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