



# Development of data bases for molecular testing of foodborne pathogens in view of outbreak preparedness

**Kris De Smet**  
**European Commission**  
**DG SANCO**  
**Unit G4: Food, Alert system and training**

**Workshop EURL *E. coli***  
**8-9 November 2012**

## Molecular testing of food-borne isolates

- *Purpose: linking human isolates with isolates detected in food/animals/feed:*
  - **Epidemiological investigations of outbreaks;**
  - **Source attribution studies;**
  - **Monitoring of spread of clones and strains;**
  - **Prediction of epidemic potential;**
- *Part of a revision on EU outbreak preparedness*
- *Examples:*
  - **Recent *Salmonella* Stanley outbreak;**
  - **2011 VTEC O104:H4 outbreak in sprouts.**

## Food-borne outbreak investigations

- *Mandatory epidemiological investigation of food-borne outbreaks under zoonoses monitoring Directive 2003/99/EC*
  - **Annual reporting to EC and EFSA**
- *Crisis management by European Commission under Regulation (EC) No 178/2002 (General Food Law)*
  - **Scientific advice and technical support may be requested from agencies (EURL, EFSA, ECDC)**
- *ECDC: EPIS-FWD*
  - **Coordination of multi-national epidemiological investigation in human health sector.**

## Existing relevant networks

- *Standing Committee on the Food Chain and Animal Health*
- *Network Committee under Decision 2119/98/EC*
- *EURL –NRL-official labs network*
- *EFSA Task Force for Zoonoses data collection*
- *ECDC Food-and Waterborne Diseases and Zoonoses (FWD) Network with the European Surveillance System (TESSy)*
- *Early warning systems*
  - **Rapid Alert System for Food and Feed (RASFF)**
  - **Early Warning and Response System (EWRS)**

## Data base for molecular testing

- *Joint initiative of the European Commission, EURLs, EFSA and ECDC;*
- *Involvement/Agreement of NRLs/national authorities essential;*
- *Build on existing networks and experiences/actions taken by certain EURLs in collaboration with several NRLs;*
- *Start with VTEC, *Listeria monocytogenes* and *Salmonella*.*

# Data base for molecular testing: approach

- *Two databases:*
  - **EFSA: isolates of food/feed/animals;**
  - **ECDC: isolates from humans.**
- *EURL involvement on food/feed/animal data:*
  - **Consistency of methodology and terminology with human data;**
  - **Curation of incoming molecular testing data;**
  - **Regular verification of database consistency;**
  - **Updating scientific parameters;**
  - **Scientific analyses of the data (support to EFSA assessments).**

## Data base for molecular testing: approach

- *Uploading data on isolates: directly by EURL, NRLs and official laboratories;*
- *Data from existing results and new data collected within zoonoses monitoring, outbreak investigations and research;*
- *NRLs must always have access to national data*
- *EFSA coordinates reporting of isolates from food/feed/animals.*

# Data base for molecular testing: ownership of the data

- *Principle: who paid the analysis is the owner:*
  - **If obtained under EURL budget or EU financed research: European Commission;**
  - **If obtained from NRLs, official laboratories, non-EU research: Member States;**
  - **Human data: Member States unless under ECDC or EU research financing.**



# Data base for molecular testing: MoU and Confidentiality

- *A Memorandum of Understanding is considered between all involved partners, describing data ownership, availability, access, use, publication, procedures, confidentiality, ...*
- *Apart from the agreements in the MoU, confidentiality obligations and protection of personal data in Directive 95/46/EC and Regulation (EC) No 45/2001 must be respected.*

## Data base for molecular testing: Use and publication of data

- *Owners of data will always be consulted for their authorisation before and publication or oral communication of data, not yet published. If multi-national:*
  - **Standing Committee on the Food Chain and Animal health (food/feed/animal data);**
  - **Network Committee under Decision 2119/98/EC (human data);**
  - **Alert situations: RASFF - EWRS – EPIS-FWD, supplemented by bilateral contacts with the EC and all involved national authorities.**
- *ECDC and EFSA may always use data compiled at national level in overview reports and opinions.*

# Data base for molecular testing: Practical steps

- *Consultation of food authorities during Standing Committee of 12/12;*
- *EFSA, ECDC and EURLs are working on a data dictionary and practical implementation of the data base;*
- *Involvement of NRLs is highly encouraged.*



**Thank you very much  
for your attention!**

**[http://ec.europa.eu/food/food/index\\_en.htm](http://ec.europa.eu/food/food/index_en.htm)**