

# VTEC in Greece – current situation

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# Organizational changes in the Greek Public Health Laboratory

■ Since last August:

Organizational Agreement between the Hellenic Center for Diseases Control and Prevention (the governing body of KEDY) and the National School of Public Health



KEDY functionally merged with the Department of Microbiology of the National School of Public Health under new management of Professor A. Vatopoulos

# Central Public Health Laboratory

Official Laboratory of Food and Water  
Microbiology

Section: Laboratory of Food Microbiology

Accredited according to EN ISO 17025:2005  
by ESYD (Hellenic Accreditation System S.A.)

# Laboratory of Food Microbiology

- Accreditation obtained for testing in food:
  - **Detection and enumeration of indicative bacteria:**
    - Total coliforms ISO 4832:1991
    - E. coli  $\beta$ -glucoronidase positive ISO 16649-2:  
2001
    - Enterobacteriaceae ISO 21528-2

# Laboratory of Food Microbiology

- **Detection and enumeration of pathogenic bacteria:**
  - **Salmonella spp** EN ISO 6579:2003 / TC1:2004
  - *Listeria monocytogenes*
    - EN ISO 11290-1:1996 Amed 1:2004
    - EN ISO 11290-2:1998 Amed 1:2004
  - *E. coli* O157 EN ISO 16654:2001
  - *Clostridium perfringens* ISO 7937:2004§
  - Coagulase positive staphylococci ISO 6888-1:1999/A1:2004
  - Staphylococcal enterotoxins: Vidas Staph enterotoxin IIS

§ not accredited

# Laboratory of Food Microbiology

- Participation in interlaboratory proficiency tests organized by Quality Management Ltd UK
- NRL for *E. coli* O157 nominated from April 2007
- Staff
  - 3 bacteriologists
  - 6 technicians

# NRL *E. coli*

## ■ Main activities

- Detection of *E. coli* O157 from food (mainly samples of market) according to EN ISO 16654: 2001 (immunomagnetic separation)
  - Enrichment: mTSB+N
  - Separation concentration: Dynabeads anti-*E. coli* O157
  - Isolation: CT-SMAC, SMAC
  - Confirmation: biochemical: indole formation
  - Serological identification: *E. coli* O157 antiserum or oxoid latex agglutination test

Participation in outbreak investigations



# NRL *E. coli*

- Development of molecular techniques for
  - Detection of the various toxins and other VF
    - Stx1
    - Stx2
    - eaeA intimin gene
    - ehxA enterohemolysin gene
  - Typing (PFGE)
    - In collaboration with the National Salmonella Reference center (National School of Public Health)

# NRL E. coli

## Plans for the future:

To implement the methods and the procedures required to fulfill the NRL function eg:

- Further develop the surveillance of VTEC
  - Establish close collaboration with the Veterinary laboratories
- Further develop methods for the detection and genotypic characterization of VTEC strains, serotyping etc
- Co-ordinate national proficiency inter-laboratory studies

To carry out our plans we hope for CRL collaboration, advice and expertise

Thank you for your attention!