



SS. CYRIL AND METODIUS UNIVERSITY
FACULTY OF VETERINARY MEDICINE SKOPJE



***Nacional Reference Laboratory
for E.Coli O157
Republic of Macedonia
Pavle Sekulovski***

Competent authority - Food

- FVA - Food and veterinary agency
- Established 1.1.2011 from
 - Food Directorate and
 - Veterinary Directorate
- Governmental body (Ministry level)
- Foodborne outbreaks still investigated by the Ministry of Health (Sanitary inspection)



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Laboratory network

- FVM – Food Institute
- National Public Health Institute
- 10 Regional Public Health Institutes

- Capacities for testing for VTEC?



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Brief history - FVM

- Veterinary Institute est. 1927
- Veterinary Faculty est. 1992
- Joined into Faculty of veterinary medicine in 2004



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Organizational structure - FVM

- **Food Institute**
- **Veterinary Institute**
- **Institute for reproduction of domestic animals and biomedicine**



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Food institute

- Food Microbiology
- Food Chemistry
- Laboratory for residues and contaminants



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Food institute - NRL

- NRL – *Salmonella*
- NRL – *Campylobacter*
- NRL – *E. coli* O157



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Accreditation

- Accredited by IARM from 2008
- 94 accredited methods
- 18 food and water microbiology
- Participation in PT organised by:
 - CRL *Salmonella*
 - CRL *Campylobacter*
 - FEPAS



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Accreditation Food microbiology

- Detection of *Salmonella* (ISO 6579:2002)
- Detection of *Staphylococcus* (ISO 6888 -1:1999)
- Enumeration of *Escherichia coli* (ISO 16649 -1:2001)
- Detection and enumeration of *Listeria monocytogenes* (ISO 11290-1:1996)
- Enumeration of micro organisms (ISO 9308-1:2000)
- Detection and enumeration of *Enterobacteriaceae* (ISO 21528 -2:2004)
- Detection and enumeration of *E.coli* O157 (ISO 16654:2001)
- Feedstuffs – detection and enumeration of *Clostridium perfringens* (ISO 7937:2004)
- Detection of termotolerant *Campylobacter* (ISO 10272:1995)
- Enumeration of sulfite – reducing bacteria (ISO 15213:2003)
- Detection of *Yersinia enterocolitica* (ISO 10273:2003)
- Water quality – enumeration of culturable micro organisms (ISO 6622:1999, detection of *E. Coli* –ISO 9308-1: 2000, detection of intestinal *enterococci* – ISO 7889-2:2000, detection and enumeration of *Pseudomonas aeruginosa* – ISO 16266:2006)



NRL - Capacities

- Methodology
 - Isolation - ISO 16654:2001
 - Serology
 - PFGE
 - rt-PCR
 - Antimicrobial resistance



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NRL - Activities

- Nominated in 2008
- Still no funding from the government
- All activities at the moment financed by FVM (mainly research)
- National surveillance program for VTEC does not exist yet
- Foodborne outbreaks investigations – very weak link between FVA and MoH



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NRL - Activities

- Training of routine laboratories
- Molecular methods development
- Connection with EURL
- Participation in external Proficiency testing
- Organisation of PT (2013-2014)



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