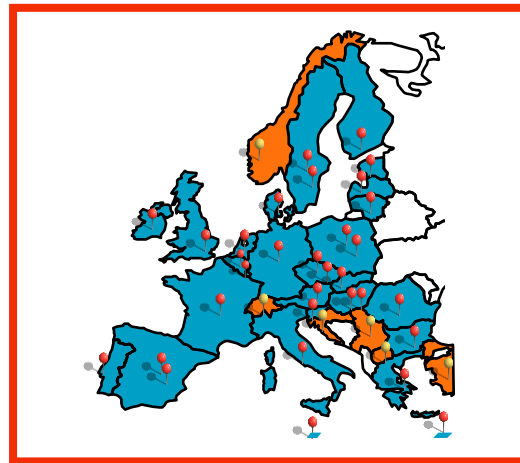


Network Activities

PTs on VTEC detection and typing and training initiatives



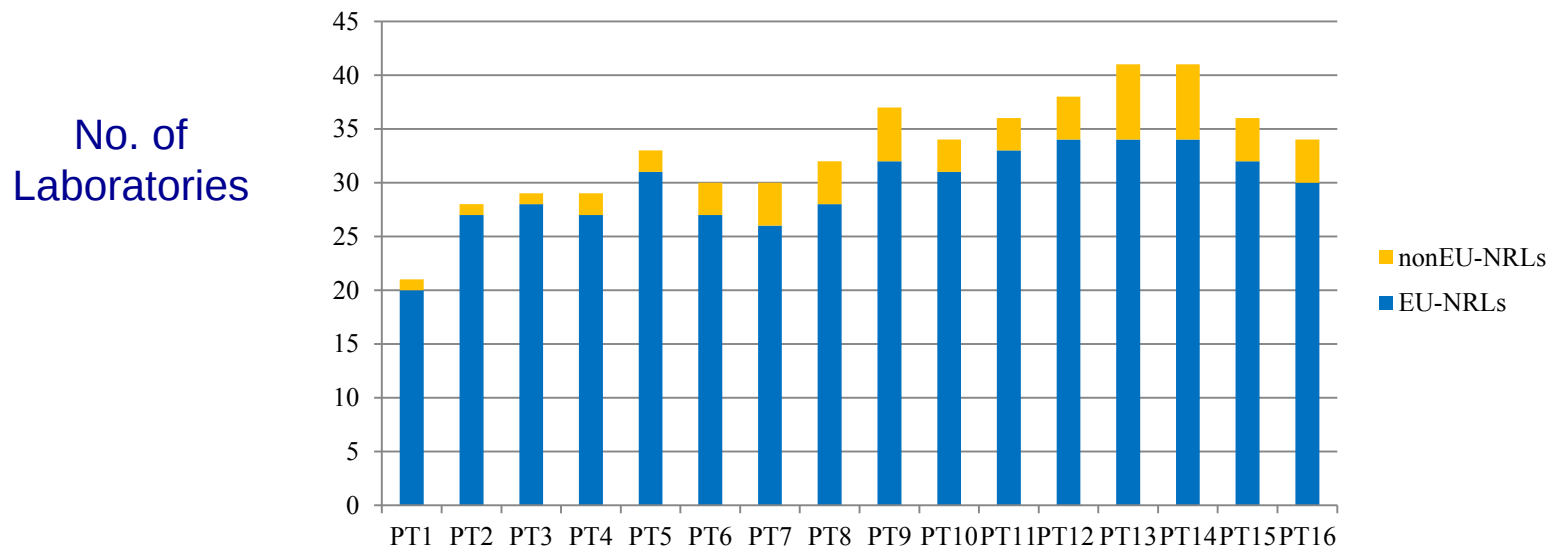
Proficiency tests (PT) on *E. coli* organized by the EU-RL

➤ Three main types of PT:

- Strain identification and typing
- Detection in food matrices
- *E. coli* molecular typing by PFGE

➤ Involvement of 42 NRLs designated by:

- All the 28 EU Member States and other European and extra European Countries



Detection of VTEC in food by ISO/TS 13136

Proficiency tests organized by the EU-RL VTEC

- 2009 (PT3): Carcass swabs – VTEC O157 and O26
- 2010 (PT4): Milk – VTEC O103
- 2011 (PT7): Vegetables (spinach) – VTEC O157 and O145
- 2012 (PT8): Water samples – VTEC O157
- 2012 (PT9): Seeds – VTEC O157
- 2013 (PT12): Sprouts – VTEC O157 and EIEC
- 2014 (PT14): Sprouts – VTEC O104
- 2015 (PT15): Sprouts – VTEC O111
- 2015 (PT16): Sprout spent irrigation water (ongoing)

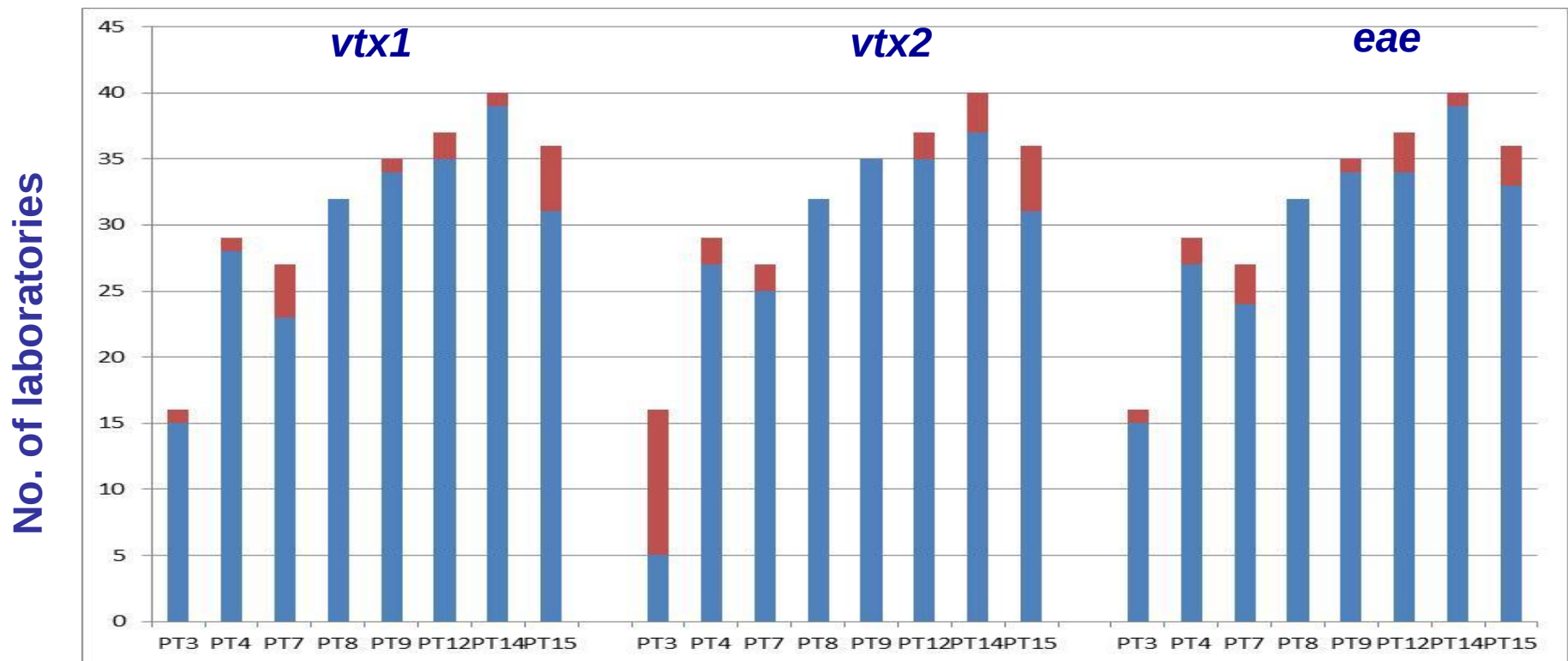


Proficiency testing: Detection of VTEC by ISO/TS 13136

Real Time PCR screening step: virulence genes

Correct results

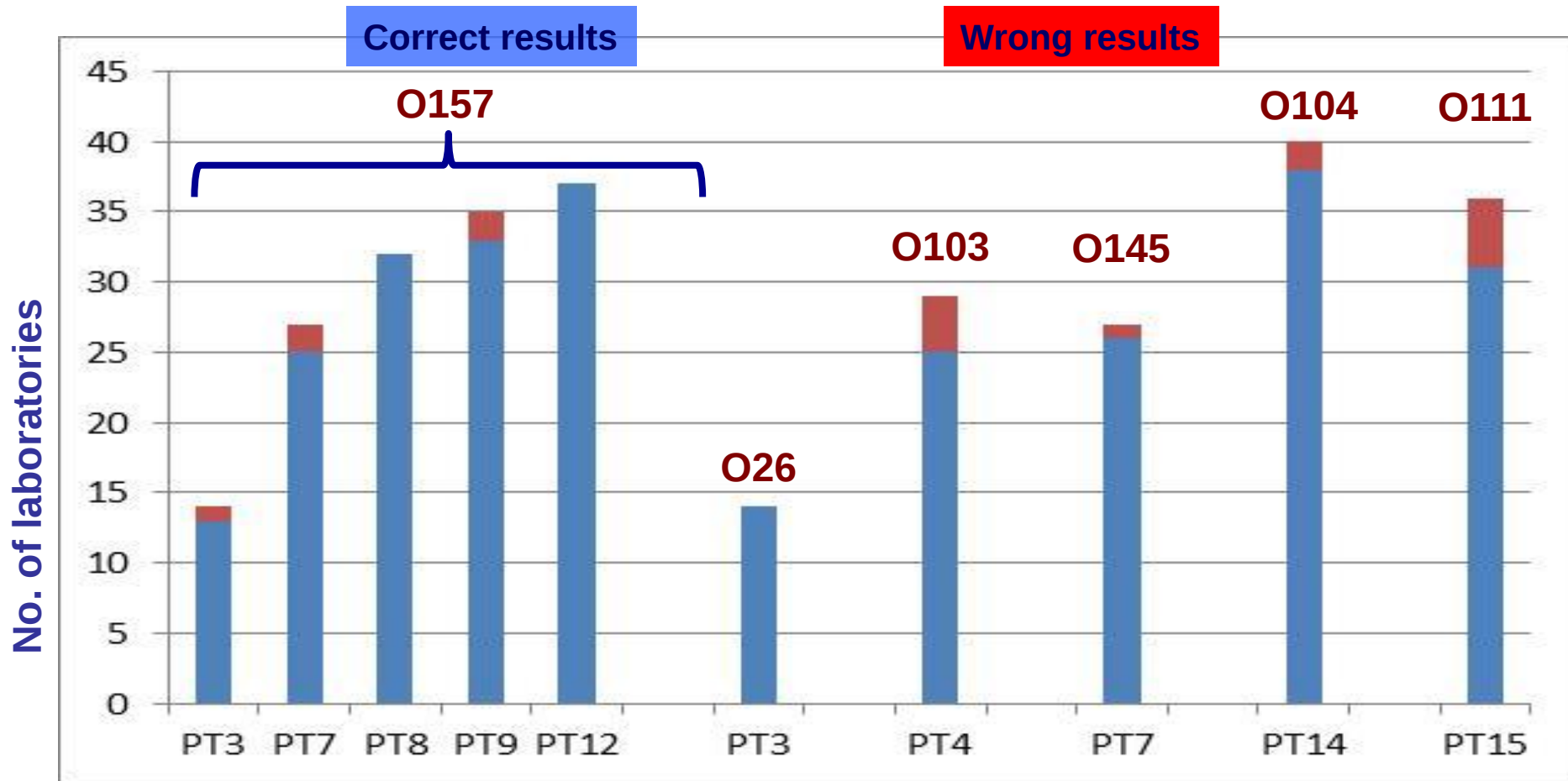
Wrong results



Proficiency tests

Proficiency testing: Detection of VTEC by ISO/TS 13136

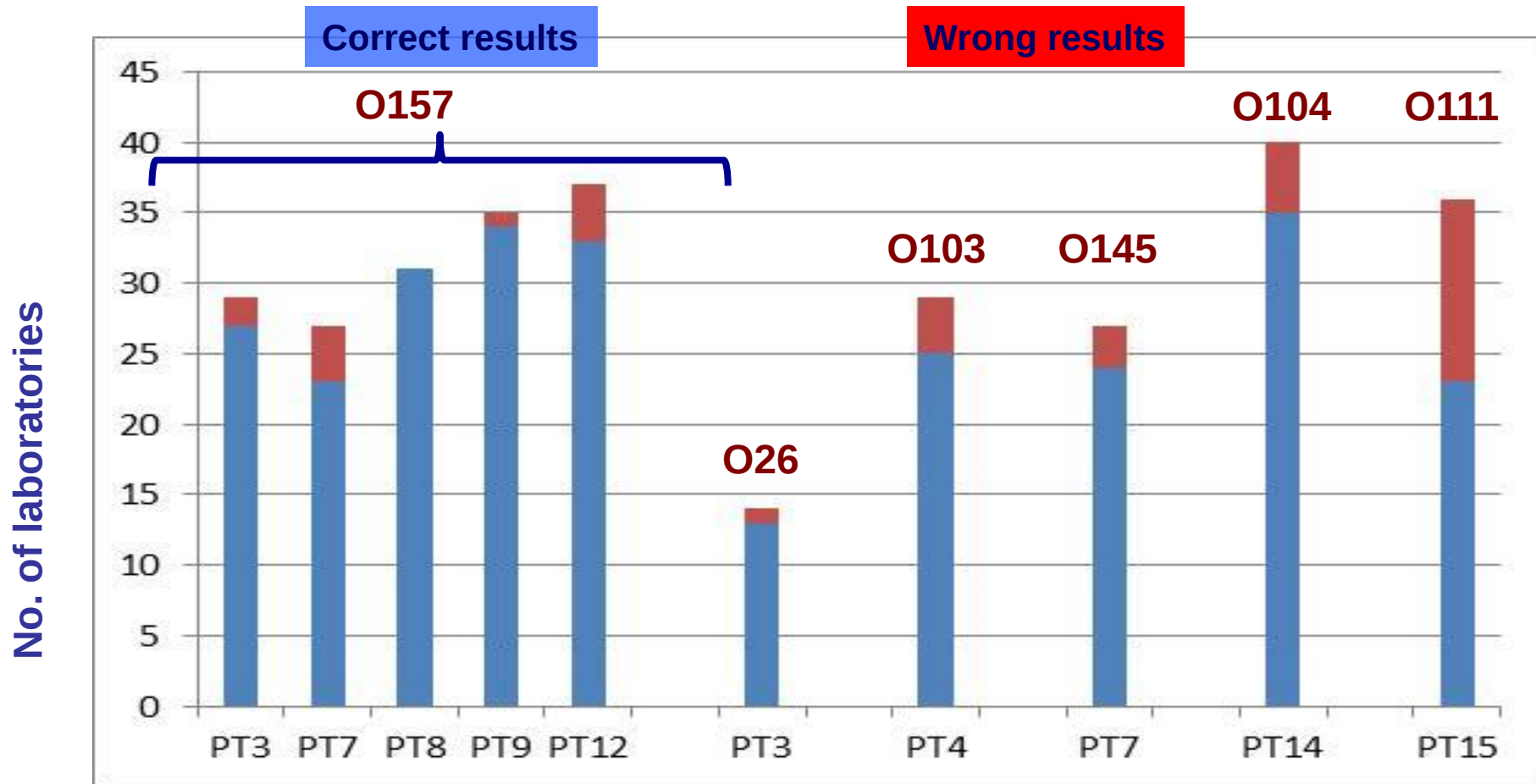
Real Time PCR screening step: O serogroup genes



Proficiency tests

Proficiency testing: Detection of VTEC by ISO/TS 13136

Isolation step



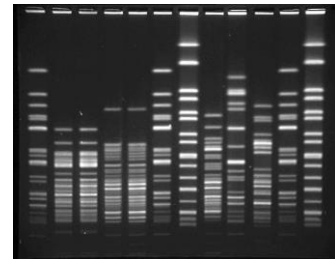
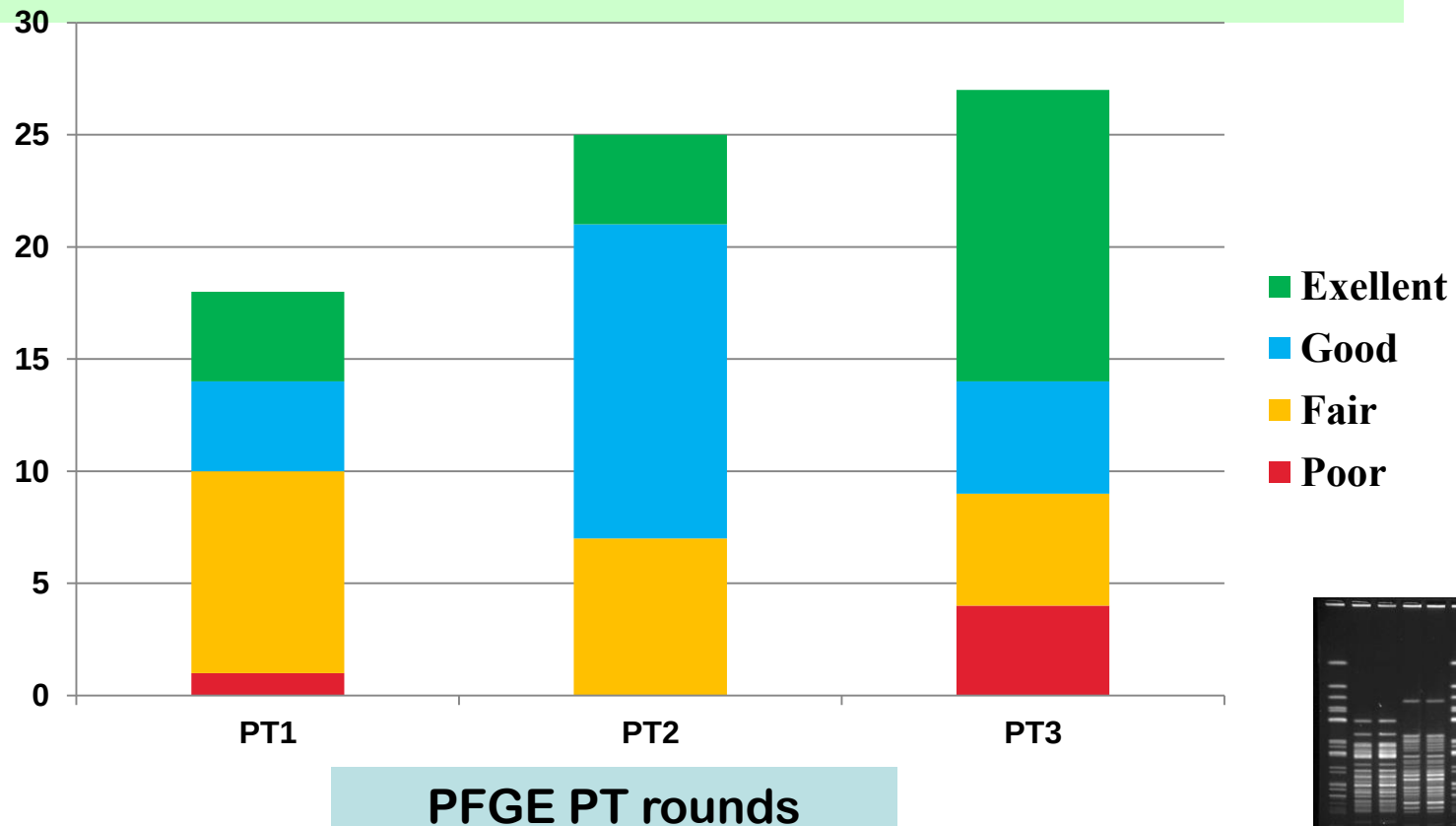
Proficiency tests

Proficiency Testing (PT) in 2016

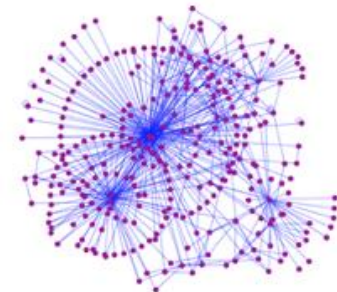
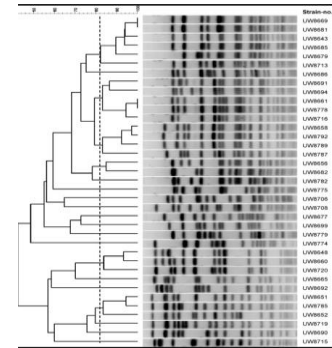
- ✓ PT on the identification and typing of pathogenic *E. coli* (VTEC and others)
- ✓ A 5th PT round for PFGE typing
- ✓ PT on the detection of VTEC in food

VTEC Network preparedness for molecular typing

Proficiency tests organized by the EU-RL VTEC
Increase in number of participants and performance

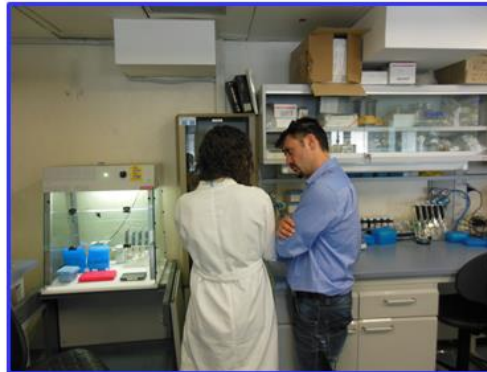
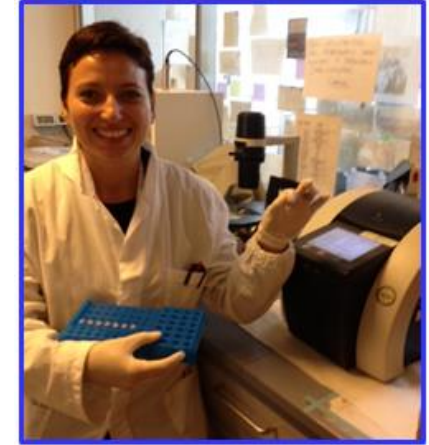
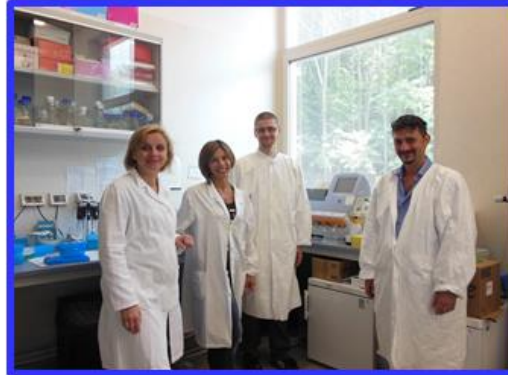
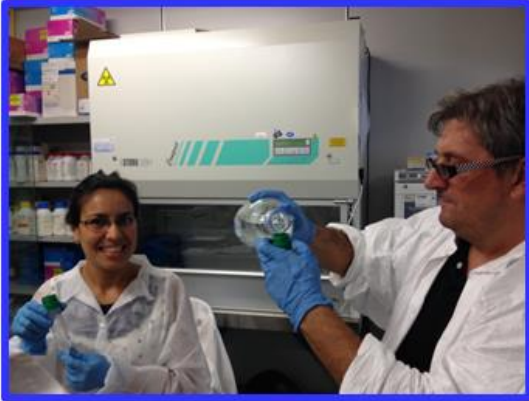


Training courses at the EU-RL VTEC



- ✓ 2014 - Training course on the use of the software package **BioNumerics** for PFGE
- ✓ 2015 - Training course on **Bioinformatics** for assembling, mining, and analysing NGS data
- ✓ 2016 (June) – 2° Training course on the use of **BioNumerics** (jointly with the EU-RLs Listeria and Salmonella) in Paris
- ✓ 2016 (November) - 2° training course on **Bioinformatics**
- ✓ 2017 – 3° Training course on the use of **BioNumerics** (jointly with the EU-RLs Listeria and Salmonella) in Rome
- ✓ **Dedicated Budget requested to DG SANTE**

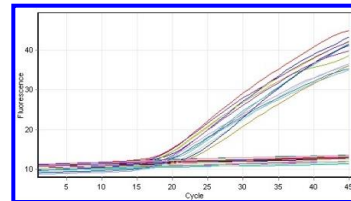
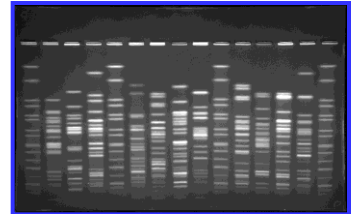
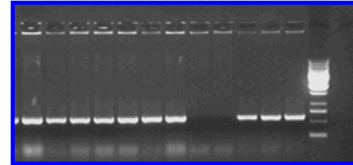
Laboratory training at the EU-RL VTEC



Standard Training Programs (STPs)

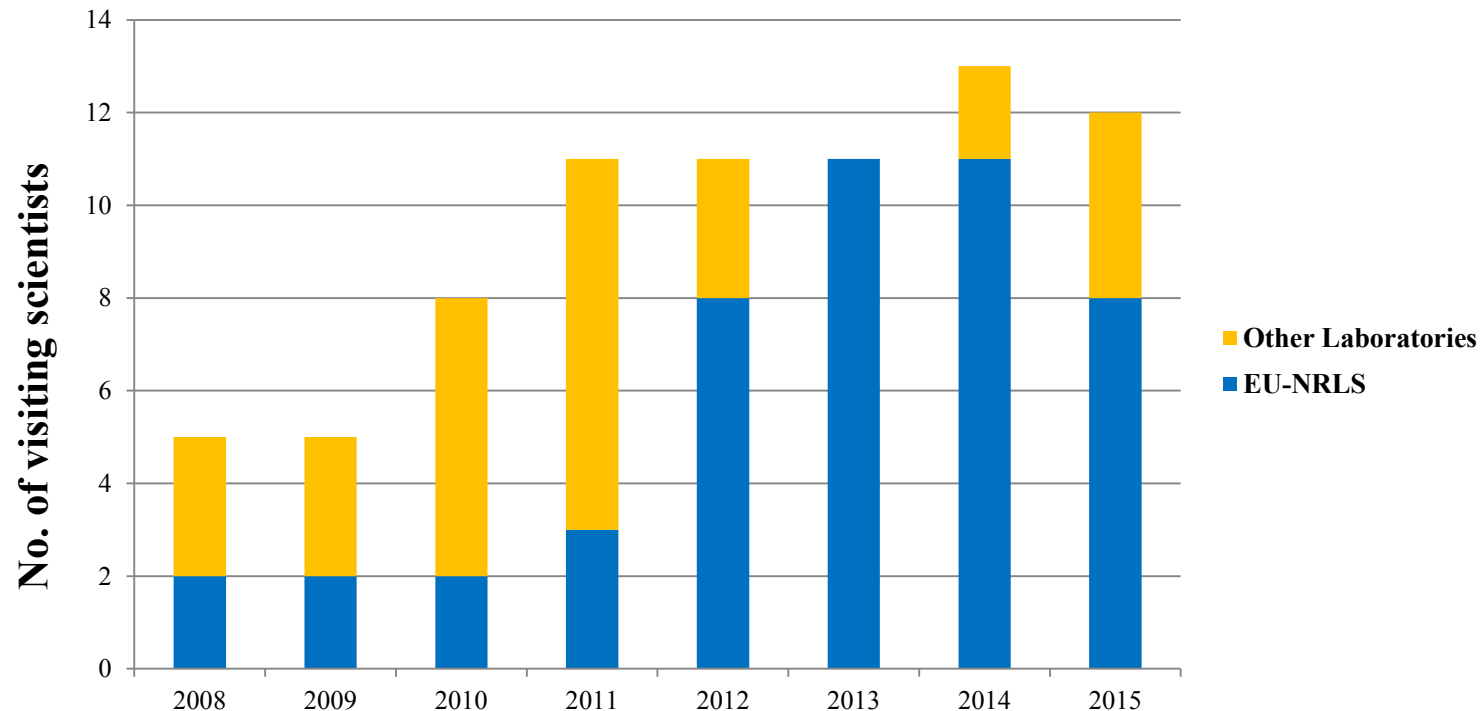
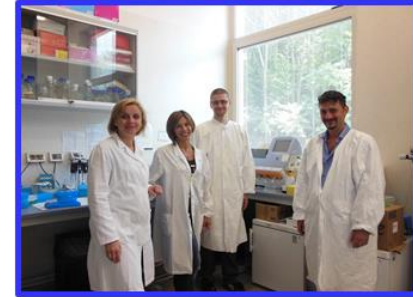
1-WEEK TRAINING PACKAGES ON:

1. Detection and characterization of VTEC in food matrices according to the ISO/TS 13136:2012
2. Molecular typing of VTEC by PFGE
3. PT organization, according to ISO 17043:2010



Training at the EU-RL VTEC

- Between 2008 and 2015, a total of 76 scientists visited the EU-RL (37 supported by DG SANCO funds)



Training at the EU-RL VTEC



Training Satisfaction Survey (59 trainees)

