



EU Reference Laboratory for *E. coli*
Department of Food Safety, Nutrition and Veterinary Public Health
Unit of Food Microbiology and Foodborne Diseases
Istituto Superiore di Sanità



**Training Course on WGS data use:
bioinformatics tools for aiding STEC outbreak
investigation**

11-12 July, 2019

Venue: Aula Zampieri

**Istituto Superiore di Sanità
Via Giano della Bella, 34 – 00161 Rome, Italy**



Organized by:

The EU Reference Laboratory for *E. coli*

Funded by the European Commission – DG SANTE

DIRECTOR OF THE COURSE

Stefano MORABITO

EU Reference Laboratory for *E. coli*

Department of Food Safety, Nutrition and Veterinary Public Health

Istituto Superiore di Sanità

SPEAKERS/TUTORS

EU Reference Laboratory for *E. coli*, ISS, Rome, Italy

Federica GIGLIUCCI

Arnold KNIJN

Antonella MAUGLIANI

Valeria MICHELACCI

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Rome, Italy

GENERAL INFORMATION

Venue: Istituto Superiore di Sanità, Via Giano della Bella, 34 – 00161 Rome, Italy

This event is part of the scientific and tutorial activities of the EURL-VTEC, funded by the European Commission – DG SANTE

For any information regarding the event, please send an email to crl.vtec@iss.it

FINAL PROGRAM

July 11th, Thursday

09.00 Registration

09.10 Welcome, housekeeping, and general overview on the training course **Stefano Morabito**

Session 1

09.20 Introduction to Next Generation Sequencing data formats, quality check and basic analytical tools **Valeria Michelacci**

09.50 Bioinformatic analysis of NGS data: approaches and opportunities **Rosangela Tozzoli**

10.10 Introduction to the ARIES webserver user-interface **Antonella Maugliani**

10.30 Hands on: Quality check and Trimming of WGS
Federica Gigliucci
Antonella Maugliani
Valeria Michelacci
Rosangela Tozzoli

11.00 Break

11.30 Basic characterization: 7-genes Multi Locus Sequence Typing (MLST), virulotyping and serotyping **Federica Gigliucci**

12.00 Hands on: 7-genes MLST
Federica Gigliucci
Antonella Maugliani
Valeria Michelacci
Rosangela Tozzoli

12.15 Hands on: virulotyping and serotyping
Federica Gigliucci
Antonella Maugliani
Valeria Michelacci
Rosangela Tozzoli

12.45 End of Session 1 and Lunch break

Session 2

13.45 Assembly and assembly statistics

Valeria Michelacci

14.00 Hands on: Assembly of the raw reads

Federica Gigliucci

Antonella Maugliani

Valeria Michelacci

Rosangela Tozzoli

14.20 Introduction to core genome MLST (cgMLST)

Federica Gigliucci

Federica Gigliucci

14.40 Hands on: Assembly statistics

Antonella Maugliani

Valeria Michelacci

Rosangela Tozzoli

15.10 Introduction to the Outbreak investigation exercise

Stefano Morabito

16.30 End of Session 2

July 12th, Friday

Session 3

09.00 **Outbreak investigation exercise**

Federica Gigliucci
Antonella Maugliani
Valeria Michelacci
Rosangela Tozzoli

12.00 Discussion on the outcome of outbreak investigation
exercise

Stefano Morabito

12.30 Introduction to automatic pipelines for *E. coli* typing
through ARIES

Valeria Michelacci

13.00 **Closure**