



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**

19-20 October, 2020

Online course

Istituto Superiore di Sanità



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
Stefano MORABITO
Rosangela TOZZOLI

TECHNICAL SECRETARIAT

Guendalina FORNARI LUSWERGH

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GENERAL INFORMATION

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

DRAFT PROGRAM

October 19th, Monday

09.00	Start of the training stage	
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	Basic characterization: 7-genes Multi Locus Sequence Typing (MLST), virulotyping and serotyping	Federica Gigliucci
11.00	Explanation of the tasks assigned to the trainees to be carried out during the hands-on session (Quality check and Trimming of WGS, 7-genes MLST, virulotyping and serotyping)	
11.20	End of session 1	
	Session 2	
14.00	Results discussion	Valeria Michelacci Federica Gigliucci
14.30	Assembly and assembly statistics	Valeria Michelacci
14.40	Introduction to core genome MLST (cgMLST)	Federica Gigliucci
15.00	Understanding the cgMLST and the concept of strain relatedness. Explanation of the tasks assigned to the trainees to be carried out during the hands-on session (Assembly statistics and cgMLST)	Valeria Michelacci
16.00	End of Session 2	

October 20th, Tuesday

Session 3

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|--------------|---|---|
| 09.00 | Results discussion | Valeria Michelacci
Federica Gigliucci
Stefano Morabito |
| 09.30 | Introduction to the Outbreak investigation exercise | Valeria Michelacci |
| 10.00 | Hands on: Outbreak investigation exercise | |

End of session 3

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| 12.00 | Discussion on the outcome of outbreak investigation exercise | Stefano Morabito |
| 13.00 | Closure | |