SURVEILLANCE — DAY 5			
Time	**Activity Description**	**Intended Learning Outcomes** *After completion, trainees will (be able to):*	**Relevance** *Why this is important for you as:*
1110-1240	Case study on enteric *E. coli* from a One Health perspective (Carolina Nodari)	Practical analysis of genomic data from enteric *E. coli* isolates from an outbreak to identify genetic determinants associated with pathogenicity, antimicrobial resistance, and virulence Investigation of population structure and transmission patterns Usage of open access computational tools for comparative genomics and phylogenetic analysis of enteric *E.coli*	**Bioinformaticians** will learn how to uncover genetic signatures linked to pathogenicity, antimicrobial resistance, and virulence in a enteric *E. coli* case study, as well as how to analyze population structure and transmission dynamics. **Microbiologists and epidemiologists** will collaborate with bioinformaticians coupling their knowledge on the ecology and biology of enteric *E. coli*, and their notions of epidemiology, to interpret genomic data on the virulence, AMR, genetic diversity, and evolutionary trends of these pathogens, informing surveillance efforts, outbreak investigations, and public health interventions.

Details

Case study on enteric *E.coli* from a One Health perspective

A practical session presenting a case study on enteric *E.coli,* will be presented from a One Health perspective, which will offer the participants a comprehensive examination of a real-world outbreak involving this enteric pathogen. This practical session will emphasize the interconnectedness of human, animal, and environmental health, and its importance in understanding and addressing the complexities of enteric pathogen outbreaks.

By adopting a One Health approach, participants will learn how multicentric factors such as agricultures, reservoirs, and environmental contamination contribute to the emergence and spread of enteric *E. coli* infections across diverse ecosystems.

Through this interactive workshop and case discussion, participants will explore the role of genomics in the dissemination of enteric *E. coli* infections. By the end of the course, participants will possess the knowledge and skills to contribute effectively to the surveillance, control, and prevention of gastrointestinal infections caused by enteric *E. coli*.