Co-funded by the European Union. Views and opinions expressed are however those of the authors only and do not necessarily reflect those of the European Union or the European Health and Digital Executive Agency (HaDEA). Neither the European Union nor HaDEA can be held responsible for them.

Foreword

The inter EURLs Working Group (WG) has been established by the European Commission with the aim to promote the use of NGS across the EURLs' networks, build NGS capacity within the EU and ensure liaison with the work of the EURLs and the work of EFSA and ECDC on the NGS mandate sent by the Commission. The WG includes all the EURLs operating in the field of the microbiological contamination of food and feed.

Joint Training Course of the inter EURLs Working Group on NGS:

Introduction to Bioinformatics for genomic data mining

Information document

Organised by:
EURL-*Listeria monocytogenes*
EURL-Coagulase Positive Staphylococci (CPS)
EURL-VTEC
EURL-*Salmonella*
EURL-Parasites
EURL-Foodborne viruses
EURL-AMR
EURL-*Campylobacter*

Information document for the Joint Training Course on NGS
Introduction to Bioinformatics for genomic data mining
ANSES, 17-18 June 2025

Next Generation Sequencing (NGS) has become a realistic alternative to classical methods for the characterization and typing of foodborne pathogens, especially for outbreak investigation, source tracking, antibiotic resistance and virulence factors investigations.

The inter EURLs Working Group on NGS was established on a mandate by the European Commission with the aim to promote the use of NGS across the EURLs networks and to build WGS capacity within the EU. Among the activities of the WG, it was decided to organise a Joint Training Course on NGS.

This activity takes advantage of the experience of five previous editions of Joint Training Courses for molecular typing of foodborne pathogens, organised by the EURLs for *Listeria monocytogenes*, *Salmonella* and VTEC with the aim of increasing the preparedness in the use of bioinformatics tools for data mining for the collection of molecular typing data on these three foodborne pathogens in the joint EFSA-ECDC database. The first three editions focused on the analysis of Pulsed Field Gel Electrophoresis profiles, the molecular data accepted at that time in the database. However, a transition to WGS data for implementation in this database was established in 2022, and it was agreed that, starting from the edition held at EURL-*Listeria monocytogenes* in 2019, the joint courses should be focused on the analysis of NGS data.
Unfortunately, due to the Covid-19 pandemic, no joint trainings could be organized in 2020 and 2021.

Like the training course of 2022, 2023, and 2024, the 2025 edition will also be jointly organised by all the EURLs part of the inter EURLs Working Group:
EURL-*Listeria monocytogenes*
EURL-Coagulase Positive Staphylococci (CPS)
EURL-VTEC
EURL-*Salmonella*
EURL-Parasites
EURL-Foodborne viruses
EURL-AMR
EURL-*Campylobacter*

The training course will be held at ANSES (Maisons Alfort, France) by EURL-Coagulase Positive Staphylococci (CPS) & EURL-*Listeria monocytogenes* **on the 17 and 18 June 2025**. The training course will start on 17 June at 9h00 and will finish on 18 June at approximately 16h00.
The training course will focus on the main features and the use of bioinformatics for analysis of WGS data at a basic level:

- Introduction to Next Generation Sequencing (NGS) data formats
- Analysis of NGS data: local and remote options, closed and custom platforms (Galaxy, Ridom SeqSphere+, etc.)
- Basic tools for analysis: quality check and trimming
- Assembly, basic typing of the strains using different approaches

An overview of the possibilities will be given to the participants through hands-on demonstrations and exercises on dry lab analysis. At the end of the course, the participants are expected to be able to use basic bioinformatics tools for analysis of NGS data. A draft agenda is circulated together with the current information document.

EURL budgets will allow to support the travel and accommodation costs for a limited number of participants from each EURL network. Therefore, we now invite you to send the application for the participation of one staff member from your NRL in the course.

Please note that the participants will be asked to bring their own laptops.

EURLs will evaluate the applications and will select the participants based on the following criteria:

- Training needs of the NRL doing the request (may also be based on performance in PTs);
- Participants from previous training initiatives on the same topics will not be prioritised;
- Relevant role of the applicant in the NRL;
- If a given laboratory has several NRL mandates, only one applicant from the same laboratory can participate.

EURL will reimburse, according to the usual EU Regulations, the expenses related to travel and accommodation of the selected applicants.

Applications must be submitted through the following online form:
Link to be provided

The deadline for application is **17 March 2025**.

EURLs will notify the applicants on acceptance by 7 April 2025 at the latest.