

Invitation to EURGen-RefLabCap virtual multidisciplinary training workshop 2023

The EURGen-RefLabCap team is pleased to invite you to the second multidisciplinary training workshop on resolving a CCRE outbreak scenario using simulation exercises and genomic tools.

Scenario:

This training workshop will be held as a simulated exercise, concerning a fictitious *Klebsiella* hospital outbreak, with data release over time (2nd to 12th of May) in the form of injects from several wards and hospitals, to simulate a possible outbreak situation. The sequence data used will cover mainly Illumina data but also (optional) MinION data, from publicly available databases.

Objective:

The objective of this exercise is to provide the supporting background for performing the various steps of CCRE outbreak investigations with a special focus on the use of WGS-based methods for bacterial typing and outbreak detection.

Who should participate?

A mix of national microbiology and healthcare epidemiology experts are encouraged to participate. Management level representatives will be encouraged to participate as representative of the laboratories that do not use WGS to acquaint them with the utility and added value of WGS-based methods for outbreak detection. Ideally, a group of colleagues from each laboratory will participate in the exercise, with one person appointed as the main contact for communication with the EURGen-RefLabCap coordinators.

Please sign up for participation using this link:

<https://ec.europa.eu/eusurvey/runner/5b2132b3-0cd9-d787-2616-3c4b1e72ce94>

Links to online participation in the workshop and materials will be shared by email prior to the workshop.

Expected outcomes:

Participants will learn about principles and methodologies for subtyping and cluster analysis to be able to detect CCRE outbreaks by using different WGS-based methods and will be able to solve outbreaks by leveraging on multidisciplinary collaboration.

The presentations will be recorded, and both presentations and material will be shared on the project website, and participants are welcome to further distribute and use the materials and to run the exercise at national level after the workshops (Train-the-Trainer).

Outline of the training workshop:

This workshop will take place in May 2023, divided into two online sessions of approximately two hours, and release of data five times and with two question surveys in between the two sessions.

The slides and recordings of the previous multidisciplinary training workshop in autumn 2022 will be available on Slack (<https://eurgen-reflabcap.slack.com/archives/C043VB35D34>) and here you can review the introduction to different tools for typing and phylogeny.

A link for downloading sequence data will be distributed. The accessible sequence data will cover both Illumina (MiSeq/NextSeq) fastq and fasta files, as well as Oxford Nanopore (MinION) fastq and fasta files. The tools presented for the exercise will mainly be web-based tools. As such, it should be possible to work with the exercise even with low computing capacity and with only basic knowledge about genome analysis. It will not be a requirement to work with MinION sequences to complete the exercise.

Exercise schedule:

Day 1: Tuesday 2 May 13:00~ 14:30

- Introduction and purpose of exercise;
- Introduction to typing methods; short review of species ID, AMR, MLST and phylogeny tools;
- *Klebsiella* hyper-virulence identification (K-PAM)
- Information about exercise setup, data, tasks and question surveys
- Time for questions

Day 2: Friday 12 May 13:00-15:00

- Presentation of exercise results (outbreak investigation)
- Use of different tools and examples of additional analyses
- Introduction to bioinformatics tool *Kleborate*
- Questions/comments from participants

Data injects

Tuesday 2 May (After the introduction)

Wednesday 3 May

Friday 5 May (After 12:00 CET)

Monday 8 May

Wednesday 10 May

Question survey deadlines

Survey 1: Friday 5 May (by 12:00 CET)

Survey 2: Wednesday 10 May (by 12:00 CET)

The pdf versions and links to the surveys will be available on 2 May.

An evaluation survey will be sent out after the workshop.

If you have any additional questions, you are welcome to contact us

Best regards,
The EURGen-RefLabCap team

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