

11. SPECIFIC TERMS OF REFERENCE FOR THE NRC FOR TOXIGENIC *CORYNEBACTERIUM*

AIMS

- Each National Reference Centre (NRC) must meet both the general and the specific terms of reference.
- In the specific terms of reference, the NRC tasks dedicated to each selected pathogen or group of pathogens are described.
- These aim to guarantee the knowledge, the know-how and the epidemiological surveillance expertise of each NRC.
- The task list is not exhaustive and can be modified in function of the requirements and the evolution of knowledge and techniques.
- In the event a NRC is unable to perform a specific task, this can be subcontracted to preserve the knowledge in the NRC. If this is the case, quality of the subcontracted task has to be proven and assured.
- Each list of specific terms of reference is divided into three parts: 1) a reminder of the specific missions, 2) a description of the tasks that the NRC must be able to do including the competencies and 3) a list of the tasks that will be asked in a particular context.
- The type of analysis indicated for each specific pathogen in each particular situation (diagnosis or confirmation, typing, sensitivity to antimicrobial substances, virulence...) is defined.
- The collaboration with national and international surveillance systems (e.g. ECDC) and when relevant with other reference centres (European Medicines Agency, food safety reference centres, veterinary reference centres, ...) is also a priority.

11. SPECIFIC TERMS OF REFERENCE FOR THE NRC FOR TOXIGENIC *CORYNEBACTERIUM*

SPECIFIC MISSIONS

1. To confirm the diagnosis of diphtheria by culture and toxigenicity testing.
2. To monitor circulating strains by performing complete strain characterization.
3. To contribute to the microbial investigation of a case report.
4. To collaborate with WHO and EU networks.
5. To participate in national surveillance, transfer microbiological data (through e-health reporting) and contribute to the presentation and interpretation of the results in a public health approach.
6. To interact with epidemiologists and other NRC's with the aim to sustain/adapt the use of the various outputs (with regards to quality of care, recommendations for control/prevention, ...).

THE NRC MUST BE ABLE TO (LEVEL OF COMPETENCES)

1. Cultivate toxigenic corynebacteria in respiratory samples.
2. Detect specific antibodies in serum of patients.
3. Identify *C. diphtheriae* and *C. ulcerans* by phenotypic and molecular assays.
4. Identify the presence of the toxin gene.
5. Identify the toxin production.
6. Perform genotyping (MLST, cgMLST)
7. Determine the antibiotic susceptibility.
8. Have access to whole genome sequencing and expertise in species specific bioinformatics analysis.
9. Manage a collection of representative strains.

TASKS THAT WILL BE ASKED IN A PARTICULAR CONTEXT

1. To confirm the etiological agent of diphtheria.
2. To identify the toxin production in all strains.
3. To centralize data on all confirmed cases.
4. To participate to seroprevalence studies, if requested.