

03. SPECIFIC TERMS OF REFERENCE FOR THE NRC FOR BORDETELLA PERTUSSIS

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.

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SPECIFIC MISSIONS

1. To perform or confirm the diagnosis by classical and/or molecular techniques.
2. To contribute to the quality assurance.
3. To characterize the isolated strains by genotyping, determination of antibiotic susceptibility, ...
4. To collaborate to national and international 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 including the assessment of the vaccination impact.
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. Perform the culture on selective media.
2. Perform the confirmation on an isolated strain by biochemical or by MALDI-TOF mass spectrometry.
3. Perform the confirmation by alternative methods: PCR, ...
4. Make the difference between: *B. pertussis*, *B. parapertussis*, *B. bronchiseptica*, *B. holmesii*, ...
5. Determine the antibiotic susceptibility and characterize the involved genes.
6. Perform genotyping using a standardized, internationally recognized method (PFGE, MLST, cgMLST) and manage a profiles collection.
7. Provide the necessary information in order to be able to compare isolated strains with vaccine strains.
8. Perform serodiagnosis by detecting specific anti-PT antibodies in the patient serum.
9. Discriminate between recently infected and recently vaccinated individuals.
10. Have access to whole genome sequencing and expertise in species specific bioinformatics analysis.

TASKS THAT WILL BE ASKED IN A PARTICULAR CONTEXT

1. To participate in the identification and assessment of vaccine failure.
2. To participate to seroprevalence studies if requested.