

04. SPECIFIC TERMS OF REFERENCE FOR THE NRC FOR BORRELIA BURGDORFERI SENSU LATO (LYME BORRELIOSIS)

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 confirm the diagnosis of Lyme borreliosis by immunoblot or by molecular techniques for positive or doubtful screening serology testing.
2. To collaborate with existing national and international networks (IDSA, ESGBOR).
3. 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.
4. 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. Confirm the serology results by western blot by looking for the presence of specific IgM and IgG in the serum or CSF.
2. Perform CXCL13 as an additional marker of Lyme neuroborreliosis.
3. Detect the presence of *Borrelia* by PCR or other means.
4. Distinguish among the different *Borrelia* species.
5. Perform the culture of spirochetes.
6. Manage a collection of representative strains.
7. Have access to whole genome sequencing and expertise in species specific bioinformatics analysis.

TASKS THAT WILL BE ASKED IN A PARTICULAR CONTEXT

1. To confirm laboratory diagnosis of Lyme borreliosis when asked.
2. To perform microbiological diagnosis of relapsing fever caused by infection with certain bacteria from the genus *Borrelia* (*B. miyamotoi*, *B. recurrentis*, ...) when asked.
3. To collaborate with other reference labs including animal and environmental labs in order to request data on vector harboured strains and participate to a joint output when relevant.
4. To participate to seroprevalence studies or other research if requested.