APPLICATION FORM IN ORDER TO APPLY FOR THE POSITION OF A NATIONAL REFERENCE CENTRE (NRC) FOR HUMAN MICROBIOLOGY

The application form should be submitted before 15/03/2019 at nrchm@sciensano.be

1. Reference of the requested NRC[1]

2. Participants list[2]

Participant number	Name of the Institute	Lab acronym or lab licence code[3]
1 (coordinator)[4]		
2		
3		

3. Administrative data on candidate(s)

Participant number (see above)[4]	
Name of the responsible	
Title	
Institute	
Department/Unit/Laboratory	
Address	
Name of the contact person	
Phone	
Email	
Participant number (see above)[4]	
Name of the responsible	
Title	
Institute	
Department/Unit/Laboratory	
Address	
Name of the contact person	
Phone	
Email	

[1] Indicate the title of the NRC as mentioned in annex 1. (example: *Yersinia enterocolitica* and *Yersinia pseudotuberculosis*)
[2] If several labs are organized in consortium, the partners must designate a coordinator lab. This table can be adjusted in function of the number of participants.
[3] See AR/KB 3-12- 1999 on clinical biology lab agreement
[4] If several labs are organized in consortium

Application form in order to apply for the position of a National Reference Centre (NRC) for Human Microbiology

IMPORTANT NOTES:

Documents such as SOP's and validation files should not be submitted, but should be available whenever asked.

Please fill in 1 application file per pathogen, or group of pathogens. Do not combine your application for several pathogens in 1 application file unless they are listed in the same group.

4. Description of the public health situation of the selected pathogen or group of pathogens

(Maximum 600 words)
Describe the lab case definition, the epidemiological situation, current surveillance and legal obligations in Belgium.

5. Motivation

(Maximum 600 words)

Please indicate the reason(s) why you wish to apply for a NRC position.

In case a consortium is formed, please motivate your reasons and the complementarity of the concerning labs.

6. List of personnel in relation to the NRC activity

6.1. Personnel currently available (qualifications, experience and main tasks).

6.2. Personnel to be recruited for the NRC activity, if applicable (qualification, main tasks).

6.3 For laboratories applying for the position of a NRC for pathogens included in annex 2:
In preparation for the tasks related to the performance verification of high-risk in-vitro diagnostic medical devices (IVD), please describe how you would prepare your laboratory for these tasks and how you would organise:

- the allocation of (extra) personnel,
- the training.

(*See annex 2 for more information*)

7. List of equipment and facilities in relation to the NRC activity

7.1. Describe the equipment available.

7.2. Describe the equipment to be acquired to fulfil the required tasks, if applicable.

7.3. Describe the available laboratory facilities (bio safety level, number of separated lab spaces).

7.4. For laboratories applying for the position of an NRC for pathogens included in annex 2: In preparation for the tasks related to the performance verification of high-risk IVD devices, please describe if free lab space is available, or can be foreseen, for storage of samples and IVD assays, and for the installation of automated IVD instruments, required for the verification of the assays (See *Annex 2 for more information*).

8. Quality-Assurance system

- Do you have a lab agreement for clinical biology activities (AR/KB 3-12-1999)?
- Are you accredited?
    - If so, under which standard and what is your accreditation number?
    - If not, please describe the way you assure the quality during analyses. Which quality procedures exist, according to which regulations do you work?
- Do you participate to External Quality Controls (Ring trials …) in relation to the concerned pathogen(s)?
    - If so, which ones and for which tests?
    - If there is no existing External Quality Control system for a certain test, how would you tackle this problem?
- In case you will subcontract a certain test, how will quality be controlled?
- Could you describe your experience in electronic data management? Do you have a LIMS (Laboratory Information Management System)? If so, which one?
- Are the microbial, clinical, epidemiological data related to the reference activities available in the LIMS or in an alternative database?

9. Technical competence, quality and reimbursement in relation to the concerned pathogen(s)

Please list all the techniques your lab is able to perform in relation to the concerned pathogen(s), please specify the test, the purpose, the specimen it is performed on.

Please also list quality assurance information (if you are accredited for the technique, if you have a validation file and SOP available).

Please also specify for which tests you will require NRC reimbursement, and for which tests reimbursement by RIZIV/INAMI or other projects exists? Use a table similar to the one below. If you apply for a group of pathogens, make a similar table for each of them.

NAME OF THE PATHOGEN								
Type of test	**Purpose of the test**	**Specimen**	**Reimbursed by**	**Accreditation? (Y/N)**	**Validation file? (Y/N)**	**SOP? (Y/N)**	**Number of tests/year**	**Proportion tests extern**
*	**	***	****				*****	******

* e.g.: Antigen ELISA, Antibody ELISA, neutralisation, PCR, Real Time PCR, culture, serotyping, Western Blot, microscopy, PAGE, immunofluorescence, agglutination, sequencing, AFLP, PCR-RFLP…
** e.g.: Diagnosis, confirmation, follow up of patient, antimicrobial susceptibility, virulence monitoring, toxicity testing, resistance mechanism…
*** e.g.: Strain, serum, whole blood, plasma, cell, CSF, urine, tissue, stool…
**** e.g.: If reimbursed by RIZIV/INAMI, please note the nomenclature number in the table, if required to be reimbursed by NRC, please note NRC in table, if reimbursed by another project, please specify this project.
***** Indicate the number of tests performed last year
****** Indicate the proportion of tests performed on samples from external laboratories/total number of tests performed

10. Description of the current activities of your lab on the selected pathogen/group of pathogens

(Maximum 1200 words)

10.1. In the field of diagnosis.

10.2. In the field of identification, typing and characterisation.

10.3. In the management of a strain collection.

10.4. In antimicrobial susceptibility testing, if applicable.

10.5. In internal training activities.

10.6. In development of new techniques.

10.7. In research.

10.8. As an expert participating in international committees (WHO, ECDC, …)

10.9. In the development and/or validation of commercial devices (manufacturers, notified bodies, WHO,…)

10.10. Others

11. Collaborations in the domain of the specific or related pathogen(s)

Could you please specify the nature of the national and international collaborations (epidemiological, research, clinical…) of your lab and the name of the institute you collaborate with?

12. Surveillance participation

(Maximum 600 words)

- Please indicate if you are performing or have performed a reference lab activity for a regional, national or international surveillance network. In which field? When? What were your tasks in this context (diagnosis, confirmation …)? What kind of epidemiological data were collected?
- Which microbial characteristics (resistance mechanisms, antimicrobial susceptibility, toxigenic activity, antigenic profile, …) of the pathogen or the infection do you follow up in the laboratory?
- Do you contribute to surveillance studies? If so, which ones?
- When an epidemiological surveillance based on a subset of strains is requested, please indicate how you would select this subset (inclusion criteria, number of strains, number of labs, time period …)?
- Could you please write down the antimicrobials that you propose to test, if antimicrobial susceptibility surveillance studies are requested?

13. Outbreak investigation

(Maximum 600 words)

Please indicate your reaction capacity in a crisis situation and the turnaround time for the tests requested in this context.

When an investigation on an outbreak is requested, please indicate how you would select the subset of strains to investigate (inclusion criteria, number of strains, number of labs, time period …)?

14. Services offered to routine labs

(Maximum 600 words)

14.1 Do you provide the necessary guidelines (and material if needed) for sample collection and sample transport to the routine labs? Please explain how.

Please describe how you, as a NRC in relationship to a routine laboratory, would organise:

- the communication of lab results,
- the communication of any useful information,
- the training.

Please specify the median and maximum turnaround time for tests requested by routine laboratories.

14.2 For laboratories applying for the position of an NRC for pathogens included in annex 2: In preparation for the tasks related to the performance verification of high-risk IVD devices, please specify:

- the median and maximum turnaround time for performing the verification of IVD devices, per type of test,
- the procedure you would develop for storage and communication of results.

15. Budget

The yearly budget is divided into 2 parts: an annual fixed amount and an annual variable amount.

An annual fixed amount of 45 000 euros is provided to each reference centre for the execution of the epidemiological tasks, for the quality assurance/accreditation, the evaluation of new diagnostic assays, the follow-up of new trends in diagnosis and the strain management. Equipment, extra personnel, training, administrative costs, evaluations… should also be paid for with this budget.

The annual variable amount depends on the tests performed by pathogen (number of tests, types of tests etc…). Only the reagents, kits, consumables, and run controls costs (incl. taxes) will be paid with this budget.

Considering the fact that the total available budget is limited and we cannot guarantee a complete reimbursement, could you estimate a yearly budget by using the table below?

Please only list the tests requiring NRC reimbursement (see the table in point 9).

Name of pathogen					
Type of test	Purpose of the test	Expected number per year	Price per test* (kits, reagents, consumables)	Total (expected number x price per test)	Effective cost reagents per test**
antibiotic susceptibility			10€		
MIC susceptibility			6€/antibiotic/strain		
PCR			25€		
Typing (PFGE, RepPCR, ribo, ...)			25€/strain		
Typing MLST			20€/gene (max 140€)		
Gene sequencing (<1 kb)			20€ (+25€/PCR)		
Culture and identification			8€		
Serotyping and antigentest			10€		
Mass spectrometry			6€		
ELISA			5€		
Western blot,			22€		
Whole genome sequencing			200€		
Yearly total:				€	

**This harmonised price will be adapted according to the index (1.147 in 2018)*

*** Indicate here the effective cost of the reagents/test for this analysis (only reagents, kits, consumables).*

If applicable, motivate the higher effective cost of the reagents as compared to the harmonized price (use of commercial kits, in vivo tests,…).

In case infectious substances are transported by courier to the NRC:

- Number of expected annual shipments by courier:……
- Unit price for shipment of package:……
- Estimated cost for shipment of samples:……..……

16. Impartiality

16.1 Do you develop assays for third parties (e.g. manufacturers, consultants) or validate commercially available devices for third parties (e.g. manufacturers, notified bodies, consultants)?

16.2 For the NRC that could be involved in the validation of commercial IVD devices (See annex 2):

- Do you have any financial or other interests in the medical device industry which could affect your impartiality?
- Describe how impartiality will be guaranteed.

17. List of the scientific publications of your microbiology unit(s) in general and on the NRC topic in particular

Please list the publications according to the following fields:

17.1. For the concerned pathogen (last 10 years)

17.2. In the field of surveillance (last 10 years)

17.3. In microbiology (last five years)

Annex 1: List of pathogens for which a call is open

ID	Pathogen(s)
1	MDRO - Antibiotic resistant gram negative bacilli
2	Arboviruses: West Nile virus , Dengue, Yellow Fever, TBE, Chikungunya, Zikavirus
3	*Bordetella pertussis*
4	*Borrelia burgdorferi* (Lyme disease)
5	*Brucella* spp.
6	*Burkholderia cepacia* complex
7	*Campylobacter* spp.
8	*Clostridium botulinum, Cl. perfringens and Cl. tetani*
9	*Clostridium difficile*
10	Congenital infections: *Toxoplasma,* rubella, cytomegalovirus and parvovirus B19
11	*Toxigenic Corynebacteria*
12	*Coxiella burnetii, Bartonella*
13	MDRO - *Enterococci*
14	Enteroviruses including polioviruses and parechoviruses
15	*Haemophilus influenzae*
16	Hantavirus
17	*Helicobacter pylori*
18	Hepatitis A, B, C, D and E viruses
19	Human papillomavirus
20	Influenza virus
21	*Legionella pneumophila*
22	*Listeria monocytogenes*
23	Measles, mumps and rubella virus
24	*Mycobacterium* spp.
25	Mycosis
26	*Neisseria meningitidis*
27	Noroviruses
28	Rabies virus
29	Respiratory pathogens: adenovirus, coronavirus including SARS, human parainfluenza virus, *Mycoplasma pneumoniae*, *Chlamydia pneumoniae,* respiratory syncytial virus (RSV), human metapneumovirus (HMPV), influenza
30	*Rickettsia, Anaplasma (Ehrlichia)*
31	Rotavirus
32	*Salmonella/Shigella* spp.
33	Shiga-toxin/verotoxin producing *E. coli* (STEC/VTEC)
34	MDRO - *Staphylococcus aureus and other spp.*
35	STI: *Treponema pallidum, Chlamydia trachomatis, Neisseria gonorrhoeae, Mycoplasma genitalium*
36	*Streptococcus agalactiae*
37	*Streptococcus pneumoniae* invasive
38	*Streptococcus pyogenes* and other invasive β-hemolytic Streptococci non-Group B
39	*Vibrio cholerae* and *Vibrio parahaemolyticus*
40	*Yersinia enterocolitica* and *Yersinia pseudotuberculosis*
41	Drug resistance among DNA viruses

Annex 2: Verification by laboratory testing, of the claimed performances and conformity of IVD devices, within the Belgian EURL IVD (European Union Reference Laboratory Network)

The Regulation 2017/746 on in vitro diagnostic medical devices (IVD), requires the verification, including by laboratory testing, of the claimed performances and conformity of the high-risk IVD devices (class D devices).

http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2017:117:TOC

All types of assays that are related to following pathogens may be concerned:

ID	Pathogen(s)
10	*Toxoplasma, cytomegalovirus*
18	*Hepatitis B, C and D viruses*
20	*Influenza virus (highly virulent pandemic)*
29	*SARS*
35	*Treponema pallidum*

Performance verification by laboratory testing of these assays will be required (1) prior to the CE marking, and (2) on representative samples of manufactured batches. This verification requires coordinated and harmonised working methods, at European level, as regards testing and assessment. In this context, the NRC will be asked to perform this verification by laboratory testing of IVD devices, within the Belgian EURL (European Union Reference Laboratory Network) after its designation by the European commission (*See article 100 of the IVD Regulation 2017/746*). IVD devices concerned will range from reagents to kits, cover different technologies, and cover different testing platforms, including self-testing and near patient testing.

Laboratories applying for the position of an NRC for pathogens included in the table above are requested to provide some information (See points 6.3, 7.4, 14.2, 16.2) in preparation for the tasks related to the performance verification of in vitro diagnostic medical devices (IVD).

This activity will be covered by the EU regulation 2017/746 (See article 100, http://eur-lex.europa.eu/legal-content/EN/TXT/?uri=OJ:L:2017:117:TOC).