

WOAH Collaborative Centre Reports Activities 2022

Activities in 2022

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Centre Information

Title of WOA Collaborating Centre	LNCR/ACSEDIATE
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Name Director of Institute (Responsible Official):	Dr Laurence GUILBERT-JULIEN
Name (including Title and Position) of Head of the Collaborating Centre (WOAH Contact Point):	Dr Laurence GUILBERT-JULIEN
Name of the writer:	Dr Laurence GUILBERT-JULIEN

TOR1 AND 2: SERVICES PROVIDED

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by WOA

Epidemiology, surveillance, risk assessment	
Title of activity	Scope
	Control of health status of breeders in French and international Semen Collection Centers, for Cattle, Pigs, Ovine and Caprine.

Surveillance of infectious diseases in the French breeding sector	Control of health status for embryo donors females for cattle. This surveillance concerns regulated and non regulated infectious diseases, with a specific focus on diseases transmissible by germinal products (semen or embryos).
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Epidemiological surveillance for vectorial diseases	Routine diagnostic of cattle and small ruminants for BTV and Schmallenberg Virus by serological and PCR analyses (on blood and on semen for PCR). Allows us to follow circulation of the virus in France among the population of Semen Collection Centers.
Epidemiology, surveillance, risk assessment	
Title of activity	Scope
Antibiotics resistance monitoring	Bacteriological analyses on semen and on medium for cattle embryo transfer. Culture, isolation and identification, and antibiograms on bacteria to evaluate antibiotics resistance.
Training, capacity building	
Title of activity	Scope
Work-study program	12 months training of a student who worked in the sero-immunology unit and presented with success a report on "Diagnostic of Bovine Tuberculosis by Interferon gamma ELISA dosage in blood".
Training, capacity building	
Title of activity	Scope
Internship	10 weeks of internship for a student who worked in the bacteriology unit and presented with success a report on "Culture of serovars of Leptospira applied to diagnostic of the disease". After his internship, the student has been accepted in Romania University to become a vet.
Training, capacity building	
Title of activity	Scope
Internship	14 weeks of internship for a student who presented with success a report on " The diagnostic of Leptospirosis by MAT (Micro-agglutination Technic) and PCR analyses on blood".
Zoonoses	
Title of activity	Scope

Surveillance of zoonotic diseases on animals	The LNCR performs regularly serological, bacteriological and PCR analyses to detect zoonotic pathogens on breeders animals, including surveillance of Brucella, Coxiella burnetii, Leptospira, Mycobacterium tuberculosis. In case of positive results, sanitary alert is sent to authorities and Reference Laboratories are contacted.
Animal Welfare	
Title of activity	Scope
Animal Welfare assessment in Semen Collection centers and Ebro donors station	The manager of LNCR is also in charge of Animal Welfare for ELIANCE that is the professional association of all companies involved in Genetic, Semen Collection Centers and Artificial Insemination for cattle in France. Management of Animal Welfare in the French reproduction units was evaluated by a first survey during 2022 in order to produce Good Practices Guidelines including specificities for the reproduction sector.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Health control of Semen producing animals and embryo donors	Regular blood and semen control by serological, molecular, cultural and spermatologicals technics.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Export diagnosis activity	Health control of animals prior to their export as live animals or prior to export of their semen. On cattle and pigs.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Boars semen extenders controls	The LNCR performs physicochemical and microbiological controls of semen extenders. We also test the effect of extender on spermatozoide (motility, viability , morphology...) over time to their shelf life.
Diagnosis, biotechnology and laboratory	
Title of activity	Scope
Validation of antibiotic combination in semen extenders	The LNCR control efficiency of antibiotic combination against Leptospira or Mycoplasma prior to their use in semen extenders. The objective is to validate that these antibiotics are equivalent to the official combination recommended by WOA. H.
Diagnosis, biotechnology and laboratory	

Title of activity	Scope
Embryo transfer medium control	The LNCR control the embryo transfer medium in accordance with recommendations of AETE. Controls for BVD Virus, Mycoplasma and commensal bacteria in the medium used to collect and wash the embryos.
Diagnosis, laboratory and biotechnology	
Title of activity	Scope
Participation to proficiency tests organised by reference laboratories	With compliance to ISO 17025 guidelines, the LNCR participate in 2022 on 28 ring tests in microbiology, virology, molecular biology and serology. These tests are organized by the National Reference Laboratories of ANSES in France and international Laboratories like Sciensano, Vetqas, GD Animal Health...
Diagnosis, laboratory and biotechnology	
Title of activity	Scope
Environmental control	We carry out regularly water, surface and air microbiological controls.

TOR3: HARMONISATION OF STANDARDS

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the main focus area for which you were designated

Proposal title	Scope/Content	Applicable area
Evaluation of a novel method to process faecal samples and detect Mycobacterium avium subsp paratuberculosis	Improving feces detection of MAP in large series of samples by QPCR	Laboratory expertise
Detection of Mycoplasma bovis by PCR in semen	Use MPI approved diagnostic tests to import bovine semen in New Zealand. Very few laboratories are managing these approved methods in Europe.	Laboratory expertise

4. Did your Collaborating Centre maintain a network with other WOAHA Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

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Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
Reproduction and Swine Health Department, New Bolton Center	University of Pennsylvania, US	Americas	Boar semen extender control, boars reproduction, technical advise about boar semen evaluation.
ANSES, National Reference Laboratory and WOHA/FAO Reference Laboratory for Brucellosis	Maisons-Alfort - France	Europe	Regular discussion and collaboration about serological methods for diagnosis of Brucella strains in breeding animals. Focus on false-positive results.
ANSES, National Reference Laboratory for BVD virus and for IBR Virus	Niort - France	Europe	Regular exchange with the teams on serological divergent results for IBR, or false positive results for BVD. Discussion on the different methods and kits approved on the French market.
ANSES, National reference Laboratory for Classical Swine Fever and Aujeszky disease	Ploufragan - France	Europe	Discussion on false positive results for Aujeszky and confirmation tests. Discussion on PRRS diagnosis.
ANSES Laboratories Headquarter	Maisons-Alfort	Europe	Collaboration with Stephan ZIENTARA who is Chairman on the Technical Scientific comitee of LNCR.
ANSES Lyon Vigimyc	Lyon - France	Europe	Collaboration on Mycoplasma spp diagnosis in bovine semen.
National Vetschool of Alfort	Maisons-Alfort - France	Europe	Regular contact with the BIOPOLE Laboratory of the Vetschool (training of teams, use of Maldi Tof for bacteriological identification...)
National Reference Centre of leptospirosis, Institut Pasteur	Paris - France	Europe	Collaboration for weekly purchase of Leptospira strains

Vet Agro Sup, National Vetschool of Lyon, Leptospirosis diagnosis Laboratory	Marcy l'Etoile - France	Europe	Technical discussion on MAT diagnosis.
REPVET (Reproduction Veterinary) Working Group.	European Forum of Animal Breeders (EFFAB)	Europe	Recurrent collaborative work on infectious and reproductive diseases. Participation to AI VETS Congress.
QUALIVET (Optimal Quality of Semen from Bovine and Porcine Species) working groupe	European Forum of animal Breeders (EFFAB)	Europe	Active participation in 2022 to the Pig Qualivet Group, about PRRS serological diagnosis.
Department of Agriculture Food and the Marine Veterinary Public Health, Pig and Poultry Health Policy Division	Dublin - Ireland	Europe	Designation of LNCR as an official Laboratory in accordance with Article 37 of regulation (EU) 2017/625.
ANSES Nationale Reference Laboratory for besnoitiose	Maisons-Alfort	Europe	Furniture of positive serum for Besnoitia to the Reference lab. Regular exchange on positive analyses.

TOR4 AND 5: NETWORKING AND COLLABORATION

5. Did your Collaborating Centre maintain a network with other WOAHA Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

No

TOR6: EXPERT CONSULTANTS

6. Did your Collaborating Centre place expert consultants at the disposal of WOAHA?

Yes

NAME OF EXPERT	KIND OF CONSULTANCY	SUBJECT
GUILBERT-JULIEN Laurence	Consultation on the new draft of Chapter 4.6 of Terrestrial Code	There were exchanges by email about the new proposed draft of 4.6 chapter of WOAHA Terrestrial Code with some discussion about the use of antibiotics in semen extenders according to WOAHA recommendations. This follows the work that was made in 2021 by the expert group for revision of the chapters 4.6 and 4.7 WOAHA Terrestrial Code.

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

7. Did your Collaborating Centre provide advice/services to requests from Members in your main focus area?

Yes

LNCR received in July an Argentine delegation from the National Animal Health Directorate which was carried out an audit on health controls in swine genetics producers to be sure of the safety of French animals or semen that Argentina could import. The delegation consisted of 3 veterinarians, the Manager of coordination for quarantine, the Head of the swine disease program and the Head of Buenos Aires Office. In accordance with our French Ministry of Agriculture, we presented them all the analyses performed in France to control swine units with a specific focus on PRRS control by PCR and serological analyses.

8. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by WOA, to personnel from WOA Members?

No

TOR8: SCIENTIFIC MEETINGS

9. Did your Collaborating Centre organise or participate in the organisation of scientific meetings related to your main focus area on behalf of WOA?

No

TOR9: DATA AND INFORMATION DISSEMINATION

10. Publication and dissemination of any information within the remit of the mandate given by WOA that may be useful to Members of WOA

a) Articles published in peer-reviewed journals:

b) International conferences:

IENTS 48th Annual Conference - January 2022 -USA (IENTS = International Embryo Technology Society) - Qualivet Pig group and AIVETS Congress Chester UK Octobre 2022 - EALVD 6th Congress Sevilla October 2022

1. IETS : Poster and communication : *Are antibiotics still truly needed in bovine embryo collection media? A preliminary study. First author Lamia Amira-Briand for ONIRIS Vetschool of Nantes. Co-authors Laurence GUILBERT-JULIEN and Wajdi BEN HANIA (Manager of microbiological unit of LNCR)*

2. Qualivet Pig group : oral presentation : *PRRS testing. How to deal with false positives Point of view of the lab. By Laurence GUILBERT-JULIEN and Marco GRECCHI (M. GRECCHI is managing the sero-immunology unit of LNCR)*

3. AIVETS Congress : oral presentation : *Animal Welfare survey in French reproduction units. By Laurence GUILBERT-JULIEN*

4. EALVD : oral communication : *Evaluation of a new device and procedure for the detection and quantification of Mycobacterium paratuberculosis by qPCR on large series of samples. 4 persons of LNCR in co-authors.*

c) National conferences:

d) Other (Provide website address or link to appropriate information):

11. What have you done in the past year to advance your area of focus, e.g. updated technology?

We keep on working on PRRS serological diagnosis as false-positive results are frequent and could be a real source of health risk for the

swine breeding units who do not vaccinate against the virus. We made a lot of comparison among the kits we use to define the best combination for us between first intention control and process of confirmation, including serological and PCR diagnosis. We are always very open to share our results with the professionals who are concern by this issue.

We also worked a lot on BVD diagnosis for cattle including comparison of the serological tests and sero-neutralization method in order to be able to give the best evaluation of the health status of futur semen producer bulls as some false positive results could also be a source of problems for the semen collection centers.

*We keep on working on PCR on semen to try to find always the best method for this very specific matrix. (Mycoplasma bovis, BTV, BVD...)
To summarize, we keep on working focused on what is our main objective : infectious diseases with an impact on reproduction and a risk or transmission by semen or embryos.*

12. Additional comments regarding your report: