

# OIE Collaborating Centres Reports Activities

## *Activities in 2021*

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<b>Title of collaborating centre:</b>	Maladies infectieuses de la reproduction en Europe
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<b>Name (including Title and Position) of Head of the Collaborating Centre (formally OIE Contact Point):</b>	Dr Laurence GUILBERT-JULIEN DVM General Manager
<b>Name of writer:</b>	Dr Laurence GUILBERT-JULIEN

**ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories**

**ToR: To identify and maintain existing expertise, in particular within its region**

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

<b>Epidemiology, surveillance, risk assessment, modelling</b>	
<b>Title of activity</b>	<b>Scope</b>
Surveillance of infectious disease in the breeding sector for ruminants and swine in France	Control the sanitary status of animal in French Semen Collection Center for regulated and non-regulated diseases.
Epidemiological surveillance for vector-borne viral diseases	Control of Blue tongue and Schmallenberg disease( by PCR and serological analyses on bulls, rams and goats in Semen Collection Centres) to evaluate viruses circulation in France.
Ureplasma and mycoplasma in semen and embryo transfer medium.	Monitor analyses for detection of Mycoplasma/Ureplasma in semen of cattle and in embryo transfer medium. Routin controls or specific diagnostic in case of fertility problems.
<b>Training, capacity building</b>	
<b>Title of activity</b>	<b>Scope</b>
Work-study program	12 months training of a student on different diagnostic methods ( serological, PCR, microbiological culture). A report and a defence will be presented at the end of the training
Training of internship students	we have provided short training sessions ( from 1 week to 3 months) for 3 trainees who were currently doing their studies to become lab technicians or to become veterinarians.
Technical Support for Vet student preparing a thesis	We followed the work of a vet student (Maëlig Marquet) who has prepared her thesis on the use of antibiotics on embryo transfer medium. We provides analyses of medium and worked with her on the results to compare situation with or without antibiotics in close relationship with the teacher who was supporting the thesis at the Vet School of Nantes. The thesis was submitted in Oct 21 with the title : " Etude de la pertinence de la suppression des antibiotiques des milieux de collecte des embryons bovins"
<b>Zoonoses</b>	
<b>Title of activity</b>	<b>Scope</b>

Surveillance of zoonotic diseases	Some diseases with impact on reproduction for ruminants and swine can also be at risk for human health. So we monitor regular controls on breeders with adapted serological, molecular and cultural technics to detect zoonotic pathogens such as Brucella, Coxiella burnetii, Mycobacterium tuberculosis, leptospira.... When we have positive result, a sanitary alert is sent to authorities
<b>Animal welfare</b>	
<b>Title of activity</b>	<b>Scope</b>
Last author of a publication on pain management after caesarean section on beef heifers.	Field study with vets and farmers that was conducted with the Vetschool of Alfort and was published in THERIOGENOLOGY in 2021 cf section about publications.
Purpose is to define a referencial for Bulls Welfare in Semen Collection Centre	Be part of the team working on the project specially for sanitary aspects. Build a questionnaire for a Survey that began end of 2021.
<b>Diagnosis, biotechnology and laboratory</b>	
<b>Title of activity</b>	<b>Scope</b>
Export diagnostic activity	Sanitary control of animal prior to their exportation for French and foreign farms
Sanitary control of Artificial insemination stud	Blood and semen control with serological, molecular, cultural and spermatological technics
Boar semen extenders control	Physicochemical and microbiological control of semen extenders are conducted in our lab. We test also the effect of extenders on spermatozoide characteristics (motility, viability, morphology...) over time and at their shelf life.
Embryo transfer medium control ( Bovine )	We control the quantity of commensal bacteria. We look also for Mycoplasma bovis and virus like BVD in medium used to wash and transfer embryos in accordance with OIE and IETS recommandations. Our controls are used to maintain official agreement of the embryo transfer teams in France.
Validation of semen extenders antibiotic association	We validate the efficiency of new antibiotics association prior to their use in semen extenders in comparison with the official association PSLs in accordance with regulatory texts.
Participation to proficiency tests organised by reference laboratories	With compliance to Iso 17025 guidelines, the LNCR participate to ring tests for microbiology, virology , molecular biology and serology. These tests are organised by National Reference Laboratories like ANSES for France (11 ring tests in 2021) and international organisation like GD Animal Health (4 RT), Sciensano (3RT)and VETQAS (4). 100% of success.

***ToR : To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty***

**2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare**

Proposal title	Scope/Content	Applicable area
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<p>Coxiella burnetii diagnostic by qPCR on feces</p>	<p>Development of a new extraction method to detect Coxiella burnetii in fecal samples by PCR. Diagnosis of Q Fever is based on detection of infected animals. Parturition products (abortion or normal calving), milk and feces are route of shedding for Coxiella burnetii. It is important to detect this fecal shedding to avoid contamination in the herd and also human exposure. PCR in feces is sometimes difficult to manage because of inhibiting substances; this new method was validated based on a better extraction step allowing lower detection level without inhibition.</p>	<p><input checked="" type="checkbox"/> Surveillance and control of animal diseases  <input type="checkbox"/> Food safety  <input type="checkbox"/> Animal welfare</p>
<p>Internal study on PRRSV serological kits</p>	<p>Internal study for serological diagnosis of PRRS.</p> <p>Efficacy comparison of PRRSV serological kits - In order to determine the best combo of kit (first intention and confirmation method) to manage "false-positive" animals. Management of false-positive serological analyses is an issue for PRRS diagnosis in boars semen collection centres as this virus circulates in farms and can lead to a risk of semen contamination. We compared 3 kits on a large number of samples (negative, positive, and "false-positive") to evaluate the best combination between kit of first intention and kit of confirmation; we presented our results to the person in charge of PRRS in ANSES PLOUFRAGAN (Dr Olivier BOURY)</p>	<p><input checked="" type="checkbox"/> Surveillance and control of animal diseases  <input type="checkbox"/> Food safety  <input type="checkbox"/> Animal welfare</p>

***ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines***

***ToR: To carry out and/or coordinate scientific and technical studies in collaboration with other centres, laboratories or organisations***

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

Yes

Name of OIE CC/RL/other organisation(s)	Location	Region of networking Centre	Purpose
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Reproduction and Swine Health Departement, New Bolton center	University of PenNsylvania, US	<input type="checkbox"/> Africa <input checked="" type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Swine extender control, swine reproduction, technical advise about spermatology; Contact person : Pr Gary Althouse
RepVet (Reproduction Veterinarians) Working Group	European Forum of Animal Breeders	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Reccurent collaborative work on infectious and reproductive diseases. Participation to AI VETS Congress.
Qualivets (Optimal Quality of Semen From Bovine and Porcine Species) Working Group	European Forum of Animal Breeders	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Leading a group working on semen contamination and use of antibiotics in semen. Activ participation to other working groups of Qualivet.
Anses Lyon -Vigimyc	Lyon, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration on the surveillance of Mycoplasma spp in cattle and small ruminants, focused on semen identification. Contact person : Florence Tardy
Anses Headquarters Laboratory	Maisons-Alfort, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Technical collaboration on vector borne diseases. Contact person : Stephan Zientara who is leading the Scientific Committee of our Lab.
National and OIE Reference lab for animal Brucellosis.	Maisons-Alfort, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration /technical assistance on serological , bacteriological test to detect Brucella in breeding animals (follow of false positive cases like cross reaction with Yersinia on boars eg.) Contact person : Claire Ponsart
National Reference Lab for Tuberculosis	Maisons-Alfort, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Technical discussion of Interferon Gamma test in cases of suspicion of false positive reaction after intradermotuberculation. LNCR was involved in a work on tuberculosis diagnosis in a Semen Collection Centre cf"National Conferences" Contact person : Maria-Laura Boschirelli
BioPôle Laboratory, Alfort Vetschool	Maisons-Alfort, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Technical collaboration based on use of MaldiTof for bacteria identification. Contact person : Dr Sylvain Bellier

Biology of Spirochetes unit, Institut Pasteur	Paris, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East	Collaboration on Leptospira strains, technical assistance Contact person : Mathieu Picardeau
LAV "Leptospiroses et analyses Vétérinaires" Laboratory, Vet Campus, VetAgro Sup	Lyon, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Contact with Professor Angeli Kodjo for leptospira diagnosis by MAT
Oniris Vetschool - Reproduction Unit	Nantes, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Work on use of antibiotics in embryo transfer medium; Vet thesis and future abstract for 2022 IETS Congress. Contact person: Dr Lamia AMIRAT-BRIAND
ANSES Reference lab for BVD	Niort, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Technical discussion about serological kits for detection of BVD virus. Positioning ELISA P80 and Seroneutralization method for breeders diagnostic. Contact person : Guy Kouokam
ANSES PRRS Team Laboratory of Ploufragan.	Ploufragan, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Technical discussion on PRRS serological kits. Contact Person Dr Olivier Bourry
Oniris National Vetschool - reproduction unit	Lyon, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	First visit for audit of Cryobank primary site by Pr Samuel Buff
French national Cryobank. Biological resources Centre.	France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Biobanking: cells, embryos and semen. LNCR is primary site. In the process of certification according to the NFS 96900
National Vetschool of Alfort - reproduction Unit.	Maisons-Alfort, France	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East	Publication of a field study on pain management after caesarean section on heifers. Contact person : Vincent Mauffre

#### 4. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres, Reference

**laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?**

No

**ToR: To place expert consultants at the disposal of the OIE.****5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?**

Yes

Name of expert	Kind of consultancy	Subject
Dr Laurence GUILBERT-JULIEN	Chairperson of a group of 7 experts nominated by OIE in Nov 2021 to review the chapters 4.6 and 4.7 of OIE Terrestrial Code. The work began at the end of 2020. In 2021 we had many calls with the experts (divided in 2 subgroups or together) to advance on the different parts of the chapters. To be able to propose a revised version to be examined by the Code Commission; this was possible thanks to full support of the OIE secretaries (Charmaine Chng, Francisco d'Alesio and Yukitake Okamura.)	Thanks to the work of this group, a report was produced and validated by the OIE DDG, Dr Matthew Stone; this report has been presented to the Code Commission at its september's meeting. Name of the report : "OIE AD HOC GROUP ON THE REVISION OF OIE TERRESTRIAL ANIMAL HEALTH CODE CHAPTERS REGARDING THE COLLECTION AND PROCESSING OF SEMEN OF ANIMALS"

**ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries****6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?**

Yes

- a) Technical visits: 2
- b) Seminars: 1
- c) Hands-on training courses: 0
- d) Internships (>1 month): 4

Type of technical training provided (a, b, c or d)	Content	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
a	Visit of the cryobank by delegates from University of Ljubljana, Jamnikarjeva 101, SI-1000, Ljubljana, Slovenia and Centre for Genetic Resources, the Netherlands (CGN), Wageningen University & Research, P.O. Box 338, 6700 AH Wageningen, the Netherlands	France, Slovenia and Netherlands	6

a	Visit of Philip Dorne, Quality Insurance Director for PIC Global Supply Chain	US	1
b	Scientific Committee of LNCR; one day of technical sessions for BTV epidemiology, Mycoplasma on semen, PRRS serological diagnostic...	France	14
d	2 young students were trained half of their time in our lab during 2021 before to pass their exam to become technician of analyses	France	2

**ToR: To organise and participate in scientific meetings and other activities on behalf of the OIE**

**7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?**

Yes

National/International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
International	QUALIVET meeting during AI VETS Congress	QUALIVET/AI VETS	20/10/2021	Poitiers	50
International	AI VETS Congress	AI VETS	20/10/2021	Poitiers	50
National	Journées Scientifiques	AEEMA 2021 Association pour l'étude de l'Epidémiologie des Maladies Animales	21/05/2021	Maisons-Alfort	35
National	Journées Scientifiques	Rencontres en santé publique vétérinaire/ADILVA	30/09/2021	Tours	75

**ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty**

**8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE**

a) Articles published in peer-reviewed journals: 1  
 "Meloxicam administration in the management of postoperative pain and inflammation associated with caesarean section in beef heifers:



Evaluation of reproductive parameters. Theriogenology 175 (2021) 148-154"

The subject of this article is related to animal welfare by pain management after cesarean section on heifers. Dr Laurence GUILBERT-JULIEN is last author.

b) International conferences: 2

1.Oral presentation during Qualivet meeting, Poitiers 2021: "Antibiotic free semen / semen contaminants"

2. Oral presentation during AI VETS Congress,Poitiers 2021 :

"Introduction to bacteria present in sperm"

c) National conferences: 2

1. Scientific days of AEEMA, co-authors in the presentation : "Réactions non spécifiques aux tests de dépistage ante mortem de la tuberculose bovine: investigations dans un centre de bovins reproducteurs." LNCR was involved in this study managed by the ANSES LAB in charge of tuberculosis.

2. Scientific Days of ADILVA, oral presentation : "Detection of Q Fever with qPCR in fecal samples: a strategic tool to control the contamination of herds by this zoonose"

d) Other

(Provide website address or link to appropriate information): 0

## **9. Additional comments regarding your report:**

As for 2020, sanitary situation in 2021 had impact on the scientific activity. Many face-to-face meetings and training of students were cancelled and some projects were reported. We hope to go back to a normal life in the future.