World Organisation for Animal Health

Isabelle Arzul - - FRANCE

WOAH Reference Laboratory Reports Activities 2024

This report has been submitted: 30 janvier 2025 13:35

LABORATORY INFORMATION

***Name of disease (or topic) for which you are a designated WOAH Reference Laboratory:**	Infection with Bonamia exitiosa and Bonamia ostreae
***Address of laboratory:**	Laboratoire de Génétique Aquaculture et Pathologie de Mollusques Marins 17390 La Tremblade
***Tel:**	+33 5 46.76.26.10
***E-mail address:**	iarzul@ifremer.fr
Website:	http://www.eurl-mollusc.eu/ https://asim.ifremer.fr/
***Name (including Title) of Head of Laboratory (Responsible Official):**	Dr Isabelle Arzul (Cadre de recherche et responsable de l'unité)
***Name (including Title and Position) of WOAH Reference Expert:**	Dr Isabelle Arzul (Cadre de recherche et responsable de l'unité)
***Which of the following defines your laboratory? Check all that apply:**	EPIC

TOR1: DIAGNOSTIC METHODS

1. Did your laboratory perform diagnostic tests for the specified disease/topic for purposes such as disease diagnosis, screening of animals for export, surveillance, etc.? (Not for quality control, proficiency testing or staff training)

Yes

Diagnostic Test	Indicated in WOAH Manual (Yes/No)	Total number of test performed last year	
Indirect diagnostic tests		Nationally	Internationally
0		0	0
Direct diagnostic tests		Nationally	Internationally
Histologie	Yes	757	23
Cytologie	Yes	50	

			0
PCR conventionnelle	Yes	50	0
PCR temps réel multiplex 1	Yes	961	0
PCR temps réel multiplex 2	Yes	123	0
Hybridation in situ	Yes	0	0
Séquençage	Yes	0	0
Métabarcoding	No	48	0

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?

No

3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient WOAH Member Countries	Country of recipients
Blocs histologiques	Histologie	0	0	4	3	IRELAND, KOREA (REP. OF), NORWAY,
Lames histologiques	Histologie	0	1	6	3	FRANCE, GREECE, IRELAND,
Tissus fixés en éthanol	PCR, PCR en temps réel, séquençage	0	8	3	4	DENMARK, FRANCE, IRELAND, UNITED KINGDOM,
Suspensions d'ADN génomique	PCR, PCR en temps réel, séquençage	0	0	1	1	CHILE,
Suspensions d'ADN plasmidique	PCR, PCR en temps réel	0	2	11	4	CROATIA, GERMANY, IRELAND, JAPAN,
Autres (Lames scannées, photos...)	Histologie	0	0	10	1	SPAIN,

4. Did your laboratory produce vaccines?

Not applicable

5. Did your laboratory supply vaccines to WOAH Members?

Not applicable

TOR3: NEW PROCEDURES

6. Did your laboratory develop new diagnostic methods for the designated pathogen or disease?

Yes

7. Did your laboratory validate diagnostic methods according to WOAH Standards for the designated pathogen or disease?

Yes

Name of the new test or diagnostic method developed	Description and References (Publication, website, etc.)
Loop-Mediated Isothermal Amplification	Cano Irene, Wood Gareth, Stone David, Noyer Mathilde, Canier Lydie, Arzul Isabelle (2024). Loop-Mediated Isothermal Amplification for the Fast Detection of Bonamia ostreae and Bonamia exitiosa in Flat Oysters. Pathogens, 13(2), 132 https://doi.org/10.3390/pathogens13020132
Bonamia ostreae and Bonamia exitiosa detection by Taqman® Real Time Polymerase Chain Reaction https	https://www.eurlmollusc.eu/content/download/137231/file/B.ostreae%26B.exitiosa%20_TaqmanRealTimePCR_editionN%C2%B01.pdf

8. Did your laboratory develop new vaccines for the designated pathogen or disease?

No

9. Did your laboratory validate vaccines according to WOAH Standards for the designated pathogen or disease?

No

TOR4: DIAGNOSTIC TESTING FACILITIES

10. Did your laboratory carry out diagnostic testing for other WOAH Members?

Yes

Name of WOAH Member Country seeking assistance	Date	Which diagnostic test used	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
IRELAND	2024-07-08	Histologie (à partir de photos)	7	0
FRENCH POLYNESIA	2024-05-15	Histologie et hybridation in situ	1	0
THE NETHERLANDS	2024-06-21	Histologie	14	0

11. Did your laboratory provide expert advice in technical consultancies on the request of an WOAH Member?

Yes

Name of the WOAH Member Country receiving a technical consultancy	Purpose	How the advice was provided
FRANCE	Améliorer la surveillance des maladies des mollusques marins	Renseignement sur les tissus à analyser pour rechercher des

		organismes pathogènes
FRANCE	Améliorer la surveillance des maladies des mollusques marins	Envoi d'information sur les organismes pathogènes de mollusques marins (4 demandes)
FRANCE	Distribution des organismes pathogènes de mollusques marins	Avis sur la détection d'agents infectieux réglementés (MDO/MRC) chez les mollusques marins en France au second semestre 2022 et premier semestre 2024
FRANCE	Distribution et veille émergence des organismes pathogènes de mollusques marins	Expertise Recherche de conditions particulières associées aux mortalités de pétoncles noirs
DENMARK	Améliorer le diagnostic des maladies des mollusques marins en PCR en temps réel	Envoi de recommandations concernant le protocole d'analyse en PCR
DENMARK	Améliorer la surveillance des maladies des mollusques marins	Envoi de conseils concernant la stratégie d'échantillonnage
UNITED KINGDOM	Améliorer le diagnostic des maladies des mollusques marins en PCR en temps réel	Envoi de recommandations concernant le protocole d'analyse en PCR
IRELAND	Améliorer le diagnostic des maladies des mollusques marins en PCR en temps réel	Envoi de recommandations concernant le protocole d'analyse en PCR
IRELAND	Améliorer le diagnostic des maladies des mollusques marins en PCR en temps réel	Envoi de recommandations concernant le contrôle environnemental
ITALY	Améliorer la surveillance des maladies des mollusques marins	Envoi de recommandations concernant les méthodes diagnostiques à utiliser
IRELAND	Améliorer la surveillance des maladies des mollusques marins	Partage de protocole pour la réalisation de prélèvements non-léthaux
SWEDEN	Evaluation de la surveillance des maladies des mollusques marins	Opinion sur le programme de surveillance déployé
GERMANY	Améliorer le diagnostic des maladies des mollusques marins en PCR en temps réel	Envoi de recommandations concernant la réalisation et le suivi des analyses en PCR
CANADA	Améliorer la surveillance des maladies des mollusques marins	Partage d'information concernant les performances de l'histologie pour la détection d'organismes pathogènes
SWEDEN	Améliorer la surveillance des maladies des mollusques marins	Recommandations concernant la démarche diagnostique à suivre

TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES

Isabelle Arzul - - FRANCE

12. Did your laboratory participate in international scientific studies in collaboration with WOAH Members other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	WOAH Member Countries involved other than your country
Development of Loop-Mediated Isothermal Amplification for the Fast Detection of Bonamia ostreae and Bonamia exitiosa in Flat Oysters.	1 year	Dvelop a rapid tool to detect Bonamia ostreae and B. exitiosa in flat oysters	CEFAS	UNITED KINGDOM

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?

No

TOR6: EPIZOOLOGICAL DATA

14. Did your Laboratory collect epidemiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:
Dans le cadre des activités du Laboratoire de Référence de l'Union Européenne pour les maladies des mollusques, notre laboratoire collecte annuellement les données épidémiologiques concernant les maladies des mollusques à l'échelle européenne

15. Did your laboratory disseminate epidemiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:
Dans le cadre des activités du Laboratoire de Référence de l'Union Européenne pour les maladies des mollusques, notre laboratoire collecte annuellement les données épidémiologiques concernant les maladies des mollusques à l'échelle européenne

16. What method of dissemination of information is most often used by your laboratory? (Indicate in the appropriate box the number by category and list the details in the box)

a) Articles published in peer-reviewed journals:

15

Dantan Luc, Carcassonne Prunelle, Degrémont Lionel, Morga Benjamin, Travers Marie-Agnès, Petton Bruno, Mege Mickael, Maurouard Elise, Allienne Francois, Courtay Gaelle, Romatif Oceane, Pouzadoux Juliette, Lami Raphaël, Intertaglia Laurent, Gueguen Yannick, Vidal Dupiol Jeremie, Toulza Eve, Cosseau Céline (2024). Microbial education plays a crucial role in harnessing the beneficial properties of

microbiota for infectious disease protection in Crassostrea gigas. Scientific Reports, 14(1), 26914 (21p.). https://doi.org/10.1038/s41598-024-76096-4

Dupoué Andreaz, Koechlin Hugo, Huber Matthias, Merrien Pauline, Le Grand Jacqueline, Corporeau Charlotte, Fleury Elodie, Bernay Benoît, de Villemereuil Pierre, Morga Benjamin, Le Luyer Jeremy (2024). Reproductive aging weakens offspring survival and constrains the telomerase response to herpesvirus in Pacific oysters. Science Advances, 10(37), eadq2311 (13p.). https://doi.org/10.1126/sciadv.adq2311

Montagnani Caroline, Morga Benjamin, Novoa Beatriz, Gourbal Benjamin, Saco Amaro, Rey-campos Magali, Bourhis Marion, Riera Fabien, Vignal Emmanuel, Corporeau Charlotte, Charriere Guillaume, Travers Agnes, Dégremont Lionel, Gueguen Yannick, Cosseau Céline, Figueras Antonio (2024). Trained immunity: Perspectives for disease control strategy in marine mollusc aquaculture. Reviews in Aquaculture, 16(4), 1472-1498. https://doi.org/10.1111/raq.12906

Munusamy Ajithkumar, Lillehammer Marie, Travers Agnes, Maurouard Elise, Aslam Muhammad Luqman, Dégremont Lionel (2024). Genetic parameters for resistance to field mortality outbreaks and resistance to a pathogenic strain of Vibrio splendidus in Mytilus edulis, Mytilus galloprovincialis and natural hybrid. Aquaculture, 590, 741034 (13p.). https://doi.org/10.1016/j.aquaculture.2024.741034

Romboli Valentina, Fotini Kokou, Degremont Lionel, Sipkema Detmer (2024). Nature's Arsenal Unlocked: Next-Generation Screening Of Aquaculture-Derived Bacteria To Prevent Oyster Diseases. AQUA 2024. August 26 - 30, 2024 Copenhagen, Denmark.

Dantan Luc, Toulza Eve, Petton Bruno, Montagnani Caroline, Degremont Lionel, Morga Benjamin, Fleury Yannick, Mitta Guillaume, Gueguen Yannick, Vidal Dupiol Jeremie, Cosseau Céline (2024). Microbial education for marine invertebrate disease prevention in aquaculture. Reviews In Aquaculture, 16(3), 1229-1243. https://doi.org/10.1111/raq.12893

Garcia Celine, Charles Maud, Chollet Bruno, Nadeau Aurelie, Serpin Delphine, Quintric Laure, Pepin Jean-Francois, Houssin Maryline, Lupo Coralie (2024). Understanding the role of Francisella halioticida in mussel mortalities in France: an integrative approach. Diseases Of Aquatic Organisms, 158, 81-99. https://doi.org/10.3354/dao03782

Morga Benjamin, Mege Mickael, Faury Nicole, Dégremont Lionel, Petton Bruno, Pépin Jean-Francois, Renault Tristan, Montagnani Caroline (2024). Antiviral protection in the Pacific oyster Crassostrea (Magallana) gigas against OsHV-1 infection using UV-inactivated virus. Frontiers In Marine Science, 11, 1378511 (10p.). https://doi.org/10.3389/fmars.2024.1378511

Cano Irene, Wood Gareth, Stone David, Noyer Mathilde, Canier Lydie, Arzul Isabelle (2024). Loop-Mediated Isothermal Amplification for the Fast Detection of Bonamia ostreae and Bonamia exitiosa in Flat Oysters. Pathogens, 13(2), 132 (15p.). https://doi.org/10.3390/pathogens13020132

Renault Tristan, Faury Nicole, Morga Benjamin (2024). Propidium monoazide PCR, a method to determine OsHV-1 undamaged capsids and to estimate virus Lethal Dose 50. Virus Research, 340, 199307 (8p.). https://doi.org/10.1016/j.virusres.2023.199307

Itoïz Sarah, Mouronvalle Clara, Perennou Morgan, Chailler Elisa, Smits Morgan, Derelle Evelyne, Metz Sebastian, Le Goïc Nelly, Bidault Adeline, de Montaudouin Xavier, Arzul Isabelle, Soudant Philippe, Chambouvet Aurélie (2024). Co-infection of two eukaryotic pathogens within clam populations in Arcachon Bay. Frontiers In Microbiology, 14, 1250947 (13p.).https://doi.org/10.3389/fmicb.2023.1250947

Valdivieso Munoz Alejandro, Morga Benjamin, Dégremont Lionel, Mege Mickael, Dorant Yann, Escoubas Jean Michel, Gawra Janan, de Lorgeril Julien, Mitta Guillaume, Cosseau Céline, Vidal Dupiol Jeremie. DNA Methylation Landscapes Before and after Pacific Oyster Mortality Syndrome are Different within and between Resistant and Susceptible Magallana Gigas. Preprint IN PRESS. https://doi.org/10.2139/ssrn.4971857

Arzul Isabelle, Lecadet Cyrielle, Canier Lydie, Chollet Bruno, Serpin Delphine, de Montaudouin Xavier (2024). Exploring the Environmental Distribution of the Oyster Parasite Haplosporidium Costale. Preprint Open Access version : https://archimer.ifremer.fr/doc/00916/102747/

Arzul Isabelle, Canier Lydie, Chollet Bruno, Garcia Celine (2024). Bonamia spp. infections of oysters. In Diseases of Bivalves. Historical and Current Perspectives. 2024. Smolowitz Roxanna (Ed.). ISBN 978-0-12-820339-2 , DOI 10.1016/C2019-0-01464-1. Chap.1 pp.1-14 (Academic Press).

Munusamy Ajithkumar, Dégremont Lionel, Garcia Celine, Ledu Christophe, Benabdelmouna Abdellah. Divergent Selection for Cytogenetic Quality in Mussel Species. Preprint IN PRESS. https://doi.org/10.2139/ssrn.4846013

b) International conferences:

13

13 présentations= 8 conférences ou séminaires internationaux

Arzul Isabelle (2024). Bonamia ostreae and Ostrea edulis. Infection trials with bivalves. AQUAEXCEL 3.0 Training course 3 - Conducting

Experimental Infection Trials In Fish And Shellfish.
Arzul Isabelle, Morga Benjamin (2024). OsHV-1 and Magallana (Crassostrea) gigas. Infection trials with bivalves. AQUAEXCEL 3.0 Training course 3 - Conducting Experimental Infection Trials In Fish And Shellfish.
Arzul Isabelle, Travers Agnes (2024). Vibrio aestuarianus and Magallana (Crassostrea) gigas. Infection trials with bivalves. AQUAEXCEL 3.0 Training course 3 - Conducting Experimental Infection Trials In Fish And Shellfish.
Arzul Isabelle, Canier Lydie (2024). Overview of main bivalve diseases. Infection trials with bivalves. AQUAEXCEL 3.0 Training course 3 - Conducting Experimental Infection Trials In Fish And Shellfish.
Garcia Celine, Chevignon Germain, Jacquot Maude, Tourbiez Delphine, Noyer Mathilde, Chollet Bruno, Serpin Delphine, Nadeau Aurelie, Canier Lydie, Arzul Isabelle, Laine Audrey, Guillou Florian, Lannelongue Gauthier, Robe Emmanuel 2024. Vibrio aestuarianus and Pacific oysters mortalities in Thau lagoon in France. 2024 Annual Meeting of National Reference Laboratories for Mollusc Diseases. Nantes 26-27 Mars 2024
Caill-Milly Nathalie, Sanchez Florence, Lissardy Muriel, Bru Noelle, Kermorvant Claire, de Montaudouin Xavier, Lapègue Sylvie, Riquet Florentine, Bouché Ludovic, D'Hardiville Céline, Lagarde Franck, Chambouvet Aurélie, Mayot Nicolas, Dauvin Jean-Claude, Pezy Jean-Philippe, Basuyaux Olivier, Gueguen Anthony, Weiller Yohan (2024). Asari clam (Ruditapes philippinarum) in France: Fishing activity, governance and present knowledge challenges regarding biology and ecology. 5th International Manila Clam (Asari) Symposium. 2-4 June 2024, Gunsan, Korea.
Arzul Isabelle, Engeslma Marc (2024). Species which may act as vectors or reservoirs of mollusc diseases covered by the Animal Health Law. 2024 Annual Meeting & Workshop of NRLs for Mollusc Diseases. 26-27th of March 2024, Nantes, France.
Ulysse Le Clanche, Serge Heurtebise, Christophe Ledu, Alexandre Cormier, Florentine Riquet (2024) Divergence and gene flow history in the native and non-indigenous clams along the French coasts. 7th International Conference on Marine Connectivity. Montpellier, France – du 27 au 31 mai 2024
Ulysse Le Clanche, Serge Heurtebise, Christophe Ledu, Alexandre Cormier, Florentine Riquet (2024) Loss of genetic diversity in the endemic and non-indigenous clams, Ruditapes decussatus and R. philippinarum, along the French coasts. XVIIIth International Symposium on Oceanography of the Bay of Biscay (ISOBAY 18). La Rochelle, France – 5-7 juin 2024
Maude Jacquot (2024) Impact of genomic data on marine mollusc disease control. Phylomap- Paris 13-14 nov 2024
Lydie Canier and Isabelle Arzul (2024) Health situation of European farmed molluscs . Health issues of wild and farmed shellfish populations in the Mediterranean - XXVIII Convegno SIPI Cesenatico, Italy 27 June
Lydie Canier, Mathilde Noyer, Aurélie Nadeau, Delphine Serpin, Céline Garcia, Isabelle Arzul (2024) PCR Validation according to the French standard NF-U47-600-2: Real-time PCR for the detection of eu regulated pathogens B. ostreae, B.exitiosa et M.refringens. Training on the Validation of Diagnostic methods for fish and crustacean diseases, DTU Aqua, Denmark 7-9 Oct 2024
Lydie Canier, Mathilde Noyer, Aurélie Nadeau, Delphine Serpin, Céline Garcia, Isabelle Arzul (2024)Validation of histological analyses for the diagnosis of mollusc diseases. Training on the Validation of Diagnostic methods for fish and crustacean diseases, DTU Aqua, Denmark 7-9 Oct 2024

c) National conferences:

4
4 présentations=3 conférences ou réunions nationales
Arzul Isabelle, Lecadet Cyrielle, Chollet Bruno, Merou Nicolas, Canier Lydie (2024). Distribution environnementale des parasites protozoaires de bivalves marins. Congrès des Sociétés Françaises de Parasitologie (SFP) et de Mycologie Médicale (SFMM). 3 au 5 Juin 2024, Angers.
Garcia Celine, Canier Lydie, Arzul Isabelle (2024). Les maladies des coquillages : Agents pathogènes réglementés et émergents. Commission sanitaire du CNPMEM, 30 mai 2024.
Canier Lydie, Garcia Celine (2024). Maladies des coquillages : Agents pathogènes réglementés et émergents. Conseil de filière coquillages. 18-19 mars 2024, Nantes.
Arzul Isabelle, Furones Dolors, Cheslett Deborah, Gennari Lorenzo, Delangle Estelle, Enez Florian, Lupo Coralie, Mortensen Stein, Pernet Fabrice, Peeler Edmund (2024). Pouvons nous prévenir et limiter l'impact des maladies des bivalves marins? Conseil de filière conchylicole.

18 & 19 mars 2024, Nantes.

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

8
Rapports
Gueguen Yannick, Arzul Isabelle, Goulletquer Philippe (2024). Rapport Final GT HUITRE. https://doi.org/10.13155/104304
Carpentier Cynthia, Vieira Johan, Bernard Laetitia, Lecler Auriane, Barbier Pierrick, Arzul Isabelle, Oudot Gaël, Bodin Paul, Weiller Yohan, Leleu Kevin (2024). Inventaire et caractérisation des populations résiduelles d'huîtres plates. Rapport d'étude CAPENA. 97p.
Canier Lydie, Noyer Mathilde, Nadeau Aurelie, Serpin Delphine, Chollet Bruno, Garcia Celine, Arzul Isabelle, Kergaravat Cedric (2024). Rapport de caractérisation et de validation d'une méthode d'analyse: PCR en temps-réel pour la détection du parasite Mikrocytos mackini chez les huitres.
Canier Lydie, Noyer Mathilde, Nadeau Aurelie, Serpin Delphine, Chollet Bruno, Garcia Celine, Arzul Isabelle, Kergaravat Cedric (2024). Rapport de caractérisation et de validation d'une méthode d'analyse: PCR en temps-réel pour la détection du parasite Perkinsus marinus chez les huitres.
Canier Lydie, Chollet Bruno, Arzul Isabelle (2024). Report of the InterLaboratory Comparison test n° 2024-ILC-01.
Canier Lydie, Garcia Celine, Chollet Bruno, Noyer Mathilde, Nadeau Aurelie, Jacquot Maude, Chevignon Germain, Arzul Isabelle (2024). Report of the 2024 Annual Meeting of National Reference Laboratories for Mollusc Diseases.

Sites internet
EU Reference Laboratory for diseases of molluscs
https://www.eurl-mollusc.eu/
Unité Adaptation et Santé des Invertébrés Marins
https://asim.ifremer.fr/

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?

Yes

a) Technical visit : 2

b) Seminars : 2

c) Hands-on training courses: 3

d) Internships (>1 month) 0

Type of technical training provided (a, b, c or d)	Country of origin of the expert(s) provided with training	No. participants from the corresponding country
A	PORTUGAL	1
A	KOREA (REP. OF)	3
B	FRANCE	10
B	BELGIUM	1
C	SPAIN	1

C	SWEDEN	1
C	NORWAY	1

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)	
NF EN ISO/IEC 17025 (accréditation)	1-2160.pdf	1-2160.pdf
ISO 9001 (certification)	37849-certificat-2024.pdf	37849-certificat-2024.pdf

19. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
Histologie-Cytologie pour la détection de Bonamia ostreae, B. exitiosa, Marteilia refringens	COFRAC
PCR pour la détection de Bonamia ostreae, B. exitiosa, Marteilia refringens	COFRAC

20. Does your laboratory maintain a “biorisk management system” for the pathogen and the disease concerned?

No

We do not have measures specific against the pathogen and the disease concerned but we have general measures in place against mollusc diseases

TOR9: SCIENTIFIC MEETINGS

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?

No

22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?

No

TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES

23. Did your laboratory exchange information with other WOAH Reference Laboratories designated for the same pathogen or disease?

Not applicable (only WOAH Reference Laboratory designated for the disease

24. Do you network (collaborate or share information) with other WOAH Reference Laboratories designated for the same pathogen?

Not applicable (only WOAH Reference Laboratory designated for the disease

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen during the past 2 years?

Not applicable (Only WOAH Reference Laboratory designated for the disease)

not applicable

26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?

Not applicable (only WOAH Reference Laboratory designated for the disease

TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen during the past 2 years?

Yes

Purpose for inter-laboratory test comparisons1	Role of your reference laboratory (organizer/participant)	No. participating laboratories	Name of the test	WOAH Member Countries
Tester la compétence des laboratoires pour la détection en histologie de certaines maladies des mollusques marins dont les infections à Bonamia sp.	Organisateur	21		BULGARIA, CANADA, CROATIA, DENMARK, FRANCE, GERMANY, GREECE, ICELAND, IRELAND, ITALY, LITHUANIA, MONTENEGRO, NORWAY, POLAND, PORTUGAL, ROMANIA, SPAIN, SWEDEN, THE NETHERLANDS, TURKEY, UNITED KINGDOM,

TOR12: EXPERT CONSULTANTS

28. Did your laboratory place expert consultants at the disposal of WOAH?

Yes

Kind of consultancy	Location	Subject (facultative)
Animation et participation à un groupe de travail	June 2024-Paris	ad hoc Group on Susceptibility of mollusc species to infection with WOAH listed diseases
Révision de deux Chapitres du manuel aquatique	à distance	Révision des chapitres sur la bonamiose et la maretiliose

29. Additional comments regarding your report:

No