

OIE Reference Laboratory Reports Activities

Activities in 2020

This report has been submitted : 2021-03-05 00:00:00

Name of disease (or topic) for which you are a designated OIE Reference Laboratory:	Bluetongue
Address of laboratory:	Via Campo Boario 64100 Teramo ITALY
Tel.:	+39-0861 33 24 40
Fax:	+39-0861 33 22 51
E-mail address:	g.savini@izs.it
Website:	www.izs.it
Name (including Title) of Head of Laboratory (Responsible Official):	Nicola D'Alterio, DVM General Director Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise. Teramo, Italy
Name (including Title and Position) of OIE Reference Expert:	Giovanni Savini , DVM, PhD. Head of the Animal Health Department and Virology and Tissue Culture Unit. Istituto Zooprofilattico Sperimentale dell' Abruzzo e del Molise. Teramo, Italy
Which of the following defines your laboratory? Check all that apply:	Governmental

ToR 1: To use, promote and disseminate diagnostic methods validated according to OIE Standards

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 OIE Manual (Yes/No)	Total number of test performed last year	
		Nationally	Internationally
Indirect diagnostic tests		Nationally	Internationally
c-ELISA	Yes	3,293	0
VNT	Yes	13,630	3,600
Direct diagnostic tests		Nationally	Internationally
Genotype specific Real-time RT-PCR	Yes	698	233
Serotype specific PCR real time	Yes	828	744
KC + VERO cell culture	Yes	188	188
Microscopic examination <i>Culicoides imicola</i>	No	2,363	
Microscopic examination <i>Culicoides</i> spp.	No	2,373	

ToR 2: To develop reference material in accordance with OIE requirements, and implement and promote the application of OIE Standards. To store and distribute to national laboratories biological reference products and any other reagents used in the diagnosis and control of the designated pathogens or disease.

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

No

3. Did your laboratory supply standard reference reagents (non OIE-approved) and/or other diagnostic reagents to OIE Member Countries?

Yes

Type of reagent available	Related diagnostic test	Produced/ provide	Amount supplied nationally (ml, mg)	Amount supplied internationally (ml, mg)	No. of recipient OIE Member Countries	Region of recipients
Control positive sera	VNT	produced	150 ml	0	0	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
BTV inactivated reference strain	RT Real Time PCR	produced	240 ml	0	0	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
BTV inactivated reference strain	RT Real Time PCR	provide	64 ml	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Antibody Test Kit c- ELISA rec VP7	c- ELISA	Produced	640 packages	0	0	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
Antibody Test Kit c- ELISA rec VP7	c- ELISA	provide	437 packages	0	1	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
c-ELISA antigen for 640 tests	c- ELISA	Produced	49,95 ml	0	0	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East

VP7 monoclonal antibody	c- ELISA	Produced	34 ml	0	0	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input type="checkbox"/> Europe <input type="checkbox"/> Middle East
-------------------------------	----------	----------	-------	---	---	--

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to OIE Member Countries?

No

ToR 3: To develop, standardise and validate, according to OIE Standards, new procedures for diagnosis and control of the designated pathogens or diseases

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?

No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?

No

ToR 4: To provide diagnostic testing facilities, and, where appropriate, scientific and technical advice on disease control measures to OIE Member Countries

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?

Yes

Name of OIE Member Country seeking assistance	Date (month)	No. samples received for provision of diagnostic support	No. samples received for provision of confirmatory diagnoses
BULGARIA	January	40	0
UNITED ARAB EMIRATES	June	0	6
ISRAEL	July	0	28
CROATIA	October	10	0
ALBANIA	November	21	0
TUNISIA	November	488	0

9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

Yes

Name of the OIE Member Country receiving a technical consultancy	Purpose	How the advice was provided
CROATIA	Diagnostic assistance	Remote assistance
ALBANIA	Diagnostic assistance	Remote assistance
BULGARIA	Diagnostic assistance	Remote assistance
UNITED ARAB EMIRATES	Diagnostic assistance and epidemiological support	Remote assistance
ISRAEL	Diagnostic assistance	Remote assistance
TUNISIA	Support to type and sequence BTV strains, to interpret diagnostic results, to confirm preliminary findings and to draw a national surveillance plan.	Remote assistance
BRAZIL	Diagnostic assistance	Remote assistance

ToR 5: To carry out and/or coordinate scientific and technical studies in collaboration with other laboratories, centres or organisations

10. Did your laboratory participate in international scientific studies in collaboration with OIE Member Countries other than the own?

Yes

Title of the study	Duration	Purpose of the study	Partners (Institutions)	OIE Member Countries involved other than your country
PALE-Blu "Understanding pathogen, livestock, environment interactions involving bluetongue virus; Project ID: 727393. 2017-2020	42 months	A network of experts BTV European Institute, with partners in endemic region of Africa the Middle East and Turkey, to increase the accuracy of BTV-strain distribution maps, to identify pathways and mechanisms for spread into and within Europe, as well as appropriate prevention strategies. These studies will provide a better understanding of incursion risks for different BTV strains, supporting effective control strategies.	The Pirbright Institute, Agence Nationale De Securite Sanitaire De L'alimentation, De L'environnement Et Du Travail, Centre De Cooperation International En Recherche Agronomique Pour Le Developpement , Friedrich Loeffler Institut, Environmental Research Group Oxford Limited, Universite Libre De Bruxelles, Instituto Nacional De Investigacion Y Tecnologia Agraria Y Alimentaria, Stichting Dienst Landbouwkundig Onderzoek, University Of Glasgow, Kimron Veterinary Institute, Universidad Complutense De Madrid, Statens Veterinaermedicinska Anstalt, Kafkas Universitesi, Institut Agronomique Et Veterinaire Hassan Ii, The University Of Nottingham, International Livestock Research Institute, Institut Senegalais De Recherches Agricoles	BELGIUM FRANCE GERMANY ISRAEL KENYA MOROCCO SENEGAL SPAIN SWEDEN TUNISIA UNITED KINGDOM
OIE twinning contract on the establishment of OIE collaborating centre on camel diseases in Abu Dhabi-UAE	5 years	The network should build up processes and tools to facilitate the diagnosis and control of the most important diseases of camelids, share information and standardize and validate diagnostic tests in line with OIE standards and guidelines.	IZSLER, IZSSi, Italian Ministry of Health, ADFQA, OIE	FRANCE UNITED ARAB EMIRATES
OIE Twinning contract for Bluetongue between Istituto Zooprofilattico Sperimentale dell' Abruzzo e del Molise and Istituto Biologico of San Paolo	2 years	To enhance capacity and improve scientific capabilities in relation to diagnosis and surveillance of Bluetongue.	Instituto Biológico of São Paulo	BRAZIL

<p>Partnership for Research and Innovation in the Mediterranean Area (PRIMA) European Commission Project "A novel integrated and sustainable approach to monitor and control Bluetongue spread in the Mediterranean Basin" (BlueMed)</p>	<p>3 years</p>	<p>Setting up a comprehensive and flexible operating model capable to detect new incursions or circulation of BTV strains and prevent and/or control their spread in the Mediterranean region. To refine current diagnostic systems and explore the basis for improved control strategies.</p>	<p>National School of Veterinary Medicine of Sidi Thabet (ENMV)/ National Institute of Veterinary Research of Tunisia (IRVT) Tunisia, National Research Centre (NRC) Egypt, ANSES France</p>	<p>EGYPT FRANCE TUNISIA</p>
<p>ECDC- EFSA Vectornet. European network of medical and veterinary entomology</p>	<p>5 years</p>	<p>To create a sense of connection between medical and veterinary entomologists and professionals interested in vector-borne diseases in the Public and Veterinary Health sector. The VectorNet Entomological Network aims to better embed entomological monitoring and knowledge in national and international vector-borne disease surveillance systems.</p>	<p>Avia-GIS, ERGO - Environmental Research Group Oxford, CIRAD - French Agricultural Research Centre for International Development, Hacettepe University, PHE - Public Health England, RIVM - Dutch Institute for Public Health and the Environment, CUNI, Charles University, Czech Republic, CIISA - Centro de Investigação Interdisciplinar em Sanidade Animal, Portugal, CReSA - Centre de Recerca en Sanitat Animal, Spain, DTU - Danmarks Tekniske Universitet, Denmark, EBC, evolutionary Biology Centre, Uppsala University, Sweden, FLI - Friederich-Loeffler-Institut, Germany, IAH, Institute of Animal Health, Pirbright Institute, UK, IRD - Institut de Recherche pour le Développement, France, IVB - Institute of Vertebrate Biology, KAU, Kafkas University, Turkey, NoviSad University, Serbia, Primarska University, Slovenia, VECPAR - Transmision Vectorielle et épidémiosurveillance des Maladies Parasitaires, Reims University, Zaragoza University, Spain</p>	<p>BELGIUM CZECH REPUBLIC DENMARK FRANCE GERMANY PORTUGAL SLOVENIA SPAIN SWEDEN THE NETHERLANDS TURKEY UNITED KINGDOM</p>

Enhancing Research for Africa Network -ERFAN	5 years	ERFAN is a strategic platform to build fruitful collaborations for both African countries and Italian institutions, allowing a continuous and updated knowledge of animal and human health conditions in relation to the African continent.	INMV, Algeria DSV, Algeria NCAH, Libya ONSSA, Morocco ONARDEL, Mauritania LNERV, Senegal NRC, Egypt ENMV, Tunisia IRVT, Tunisia ENMV, Tunisia	ALGERIA EGYPT LIBYA MAURITANIA MOROCCO SENEGAL TUNISIA
Med-Vet ET-1 JRP (MAD-VIR) "Metagenomic Array Detection of emerging Virus in EU	2 years	To further develop and harmonize a non-NGS-based metagenomics method for detection of viral FBZ agents and emerging threats	Denmark; ANSES, France; PIWET, Poland; APHA, UK;NCE, Hungary; VRI, Czech Republic; Surrey Univ., UK;IZSLER, Italy; INIA, Spain	CZECH REPUBLIC DENMARK FRANCE HUNGARY POLAND SPAIN UNITED KINGDOM
Point-of-incidence toolbox for emerging virus threats (TELE-Vir)	2 years	To develop a very fast point-of-incidence (poi) toolbox for identification and characterization of emerging virus threats for humans and/or domestic and wildlife animals.	INSA, Portugal, Sciensano, Belgium, INIA-CISA, Spain, PIWET, Poland VRI, Czech Republic, SVA,Sweden, ANSES, France, UoS, UK, NVI, Norway, IZSLER, Italy, SSI,Denmark	BELGIUM CZECH REPUBLIC DENMARK FRANCE NORWAY POLAND PORTUGAL SPAIN SWEDEN UNITED KINGDOM
EuropeAid140314/DH/SER/Multi - SANTE/2018-G-046 EU Regional action on animal disease eradication in the Western Balkans (ADEWB) Project	3 years	Design a strategy for vaccination	Albania, Kosovo , North Macedonia, Montenegro; Serbia; Romania; Bosnia Erzegovina	ALBANIA BOSNIA AND HERZEGOVINA MONTENEGRO NORTH MACEDONIA (REP. OF) ROMANIA SERBIA

ToR 6: To collect, process, analyse, publish and disseminate epizootiological data relevant to the designated pathogens or diseases

11. Did your Laboratory collect epizootiological data relevant to international disease control?

Yes

If the answer is yes, please provide details of the data collected:

- Sequencing of BTV-1 Eastern strain circulating in United Amirate Emirates in 2020 - Sequencing of BTV-4 strain circulating in Croatia in 2020

12. Did your laboratory disseminate epizootiological data that had been processed and analysed?

Yes

If the answer is yes, please provide details of the data collected:

- Sequencing of BTV-4 strain circulating in Italy in 2020 - Sequencing of BTV-3 strain circulating in Sardinia (Italy) in 2020

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

a) Articles published in peer-reviewed journals: 10

1. Angela M. Rocchigiani, Maria G. Tilocca, Ottavio Portanti, Bruna Vodret, Roberto Bechere, Marco Di Domenico, Giovanni Savini, Alessio Lorusso, Giantonella Puggioni. Development of a Digital RT-PCR Method for Absolute Quantification of Bluetongue Virus in Field Samples. *Front Vet Sci.* 2020; 7: 170. Published online 2020 Apr 21. doi: 10.3389/fvets.2020.00170. PMID: PMC7186476
2. Natalia Golender, Velizar Bumbarov, Avi Eldar, Alessio Lorusso, Gabriel Kenigswald, Joseph Seffi Varsano, Dan David, Shani Schainin, Ilan Dagoni, Josef Gur, Alon Kaplan, Anna Gorohov, Ori Koren, Eldad Oron, Yevgeny Khinich, Ily Sclamovich, Abraham Meir, Giovanni Savini. Bluetongue Serotype 3 in Israel 2013–2018: Clinical Manifestations of the Disease and Molecular Characterization of Israeli Strains. *Front Vet Sci.* 2020; 7: 112. Published online 2020 Mar 6. doi: 10.3389/fvets.2020.00112. PMID: PMC7068852
3. William C. Wilson, Dana Mitzel, Giovanni Savini, Stéphan Zientara, Juergen A. Richt. Editorial: Emerging Arboviruses. *Front Vet Sci.* 2020; 7: 593872. Published online 2020 Nov 6. doi: 10.3389/fvets.2020.59387. PMID: PMC7677233
4. David J. Pascall, Kyriaki Nomikou, Emmanuel Bréard, Stephan Zientara, Ana da Silva Filipe, Bernd Hoffmann, Maude Jacquot, Joshua B. Singer, Kris De Clercq, Anette Bøtner, Corinne Sailleau, Cyril Viarouge, Carrie Batten, Giantonella Puggioni, Ciriaco Ligios, Giovanni Savini, Piet A. van Rijn, Peter P. C. Mertens, Roman Biek, Massimo Palmarini. "Frozen evolution" of an RNA virus suggests accidental release as a potential cause of arbovirus re-emergence. *PLoS Biol.* 2020 Apr; 18(4): e3000673. Published online 2020 Apr 28. doi: 10.1371/journal.pbio.3000673. PMID: PMC7188197
5. Balenghien T., Neil A., Arnþórsdóttir Auður L., Bisia M., Blackwell A., Bodker R., Bourquia M., Boutsini S., Carpenter S., Colenutt C., Culverwell L., Cvetkovikj A., Dascălu L., De Regge N., Dhollander S., Elbers A.R.W., England M., Filatov S., Garros C., Goffredo M., Haddad N., Hoyer Hoke T., Hristescu D., Khallaayoune K., Kocisova A., Larska M., Lucientes J., Mathieu B., Miranda M. A., Murchie A., Nițescu C., Ozoliņa Z., Pereira da Fonseca I., Petric D., Pudar D., Ramilo D., Richardson J., Seglina Z., Sghaier S., Stefanovska J., Stougiou D., Sviland S., Tchakarova S., Van Bortel W., Verdun Castello M., Veronesi E., Versteirt V., Wint W. 2020. "VectorNet Data Series 3: Culicoides Abundance Distribution Models for Europe and Surrounding Regions." *Open Health Data*, 7: 2. DOI: <https://doi.org/10.5334/ohd.33>.
6. Moreau .Y, Gil P., Exbrayat A., Rakotoarivony I., Bréard E., Sailleau C., Viarouge C., Zientara S., Savini G., Goffredo M., Mancini G., Loire E., Gutierrez S. 2020. "The genome segments of Bluetongue virus differ in copy number in a host-specific manner." *J Virol.* 2020 Oct 7;:jvi.01834-20. doi: 10.1128/JVI.01834-20. Epub ahead of print. PMID: 33028716;
7. Hristescu D., Bărbuceanu F., Dascălu L., Nițescu C., Goffredo M., Santilli A., Quaglia M., Balenghien T. and Predoi G. 2020. Species composition and relative abundance of the genus *Culicoides* (Diptera: Ceratopogonidae) in Romania *Parasites Vectors* (2020) 13:393 <https://doi.org/10.1186/s13071-020-04247-3>;
8. Mignotte A., Garros C., Gardès L., Balenghien T., Duhayon M., Rakotoarivony I., Tabourin L., Poujol L., Mathieu B., Ibañez Justicia A., Deniz A., Cvetkovikj A., Purse B.V., Ramilo D.W., Stougiou D., Werner D., Pudar D., Petric D., Veronesi E., Jacobs F., Kampen H., Pereira da Fonseca I., Lucientes J., Navarro J., Martinez de la Puente J., Stefanovska J., Searle K.R., Khallaayoune K., Culverwell L., Larska M., Bourquia M., Goffredo M., Bisia M., England M., Robin M., Quaglia M., Miranda-Chueca M.A., Bødker R., Estrada-Peña R., Carpenter S., Tchakarova S., Boutsini S., Sviland S., Schäfer .M., Ozoliņa Z., Segliņa Z., Vatansever Z., and Huber K. 2020. "The tree that hides

the forest: cryptic diversity and phylogenetic relationships in the Palaearctic vector *Obsoletus/Scoticus* Complex (Diptera: Ceratopogonidae) at the European level” *Parasit Vectors* 2020 May 20; 13(1):265. doi:

10.1186/s13071-020-04114-1;

9. Luciani M, Di Febo T, Ronchi GF, Sacchini F, Rossi E, Ulisse S, Di Pancrazio C, Antonucci D, Salini R, Teodori L, Podaliri Vulpiani M, Tittarelli M, Di Ventura M. Alternative methods to reduce the animal use in quality controls of inactivated BTV8 Bluetongue vaccines. *Prev Vet Med.* 2020 Feb 7;176:104923.

doi:10.1016/j.prevetmed.2020.104923.

10. S. Ulisse · M. Iorio · G. Armillotta · C. Laguardia · L. Testa · S. Capista · P. Centorame · S. Traini A. Serroni · F. Monaco · M. Caporale · M. T. Mercante · M. Di Ventura Production and Easy One-Step Purification of Bluetongue Recombinant VP7 from Infected Sf9 Supernatant for an Immunoenzymatic Assay (ELISA) *Molecular Biotechnology* <https://doi.org/10.1007/s12033-020-00282-8>

b) International conferences: 4

1. TELE-Vir Kick-off-meeting. Teramo (Italy), 21-22 January 2020

2. Online Meeting "ERFAN Working Group Vector Born Disease, North-West Africa". 23 July 2020

3. Online Meeting "Regional meeting of the CVOs of countries of the Western Balkan on bluetongue control". 15 September 2020

4. Webinar "EU African Horse Sickness and Bluetongue Reference Laboratories", 1-2 december 2020

c) National conferences: 1

Online webinar "I risultati della ricerca corrente condotta dall'Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale". Anno 2019." June 2020

d) Other:

(Provide website address or link to appropriate information) 1

A public web site (www.izs.it) disseminating information and data on Bluetongue is continuously updated in order to have:

- the latest on the Italian and European Regulations issued by the Italian Ministry of Health;
- the current (2020) and past (2008-2019) epidemiological situations in Italy;
- weekly updated maps on entomological and serological surveillance activities (bluetongue national information system);
- the current epidemiological situations in the Mediterranean Basin;
- rules and regulations
- an scientific documents on-line.

ToR 7: To provide scientific and technical training for personnel from OIE Member Countries

To recommend the prescribed and alternative tests or vaccines as OIE Standards

14. Did your laboratory provide scientific and technical training to laboratory personnel from other OIE Member Countries?

No

ToR 8: To maintain a system of quality assurance, biosafety and biosecurity relevant for the pathogen and the disease concerned

15. Does your laboratory have a Quality Management System?

Yes

Quality management system adopted	Certificate scan (PDF, JPG, PNG format)
ISO 17025	ACCREDIA_IZSAM_Italy.pdf

16. Is your quality management system accredited?

Yes

Test for which your laboratory is accredited	Accreditation body
VNT	ACCREDIA
c-ELISA	ACCREDIA
Genotype specific Real-time RT-PCR	ACCREDIA
Kc+VERO cell culture	ACCREDIA

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

Yes

(See *Manual of Diagnostic Tests and Vaccines for Terrestrial Animals, Chapter 1.1.4*)

ToR 9: To organise and participate in scientific meetings on behalf of the OIE

18. Did your laboratory organise scientific meetings on behalf of the OIE?

Yes

National/ International	Title of event	Co-organiser	Date (mm/yy)	Location	No. Participants
National	I risultati della ricerca corrente condotta dall'Istituto Zooprofilattico Sperimentale dell'Abruzzo e del Molise "G. Caporale". Anno 2019	Italian Ministry of Health	06/20	online	80
International	Kick off Meeting TELE VIR project	Project partners	1/20	Teramo, Italy	21
International	Online Meeting ERFAN project	Project partner	7/20	online	10

19. Did your laboratory participate in scientific meetings on behalf of the OIE?

Yes

Title of event	Date (mm/yy)	Location	Role (speaker, presenting poster, short communications)	Title of the work presented
Kick off Meeting TELE VIR project	1/20	Teramo, Italy	Speaker	"IZSAM and the role in the TELE-Vir project"&"The Italian Platform for collection and sharing of microbial pathogens NGS data"
Regional meeting of the CVOs of countries of the Western Balkan on bluetongue control	9/20	online	Speaker	Bluetongue control strategy
Webinar "EU Bluetongue Reference Laboratories"	12/20	online	Auditor	/

ToR 10: To establish and maintain a network with other OIE Reference Laboratories designated for the same pathogen or disease and organise regular inter-laboratory proficiency testing to ensure comparability of results

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

Yes

21. Was your laboratory involved in maintaining a network with OIE Reference Laboratories designated for the same pathogen or disease by organising or participating in proficiency tests?

Yes

Purpose of the proficiency tests: ¹	Role of your Reference Laboratory (organiser/ participant)	No. participants	Participating OIE Ref. Labs/ organising OIE Ref. Lab.
Detection of BTV and serotyping in blood samples (Real Time RT-PCR)	Participant	50	5/0
Detection of BTV antibody in serum samples (c-ELISA)	Participant	48	5/0

¹ validation of a diagnostic protocol: specify the test; quality control of vaccines: specify the vaccine type, etc.

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

Yes

Title of the project or contract	Scope	Name(s) of relevant OIE Reference Laboratories
OIE Bluetongue reference laboratories network (OIE-BTNet)	Sharing reagents, updating, revising and validating the protocols of old procedures and adding new diagnostic procedures	All the OIE BT reference laboratories
Understanding pathogen, livestock, environment interactions involving bluetongue virus_Pale Blu	A network of experts BTV European Institute, with partners in endemic region of Africa the Middle East and Turkey, to increase the accuracy of BTV-strain distribution maps, to identify pathways and mechanisms for spread into and within Europe, as well as appropriate prevention strategies. These studies will provide a better understanding of incursion risks for different BTV strains, supporting effective control strategies	Pirbright Institute

ToR 11: To organise inter-laboratory proficiency testing with laboratories other than OIE Reference Laboratories for the same pathogens and diseases to ensure equivalence of results

23. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than OIE Reference Laboratories for the same disease?

Yes

Note: See Interlaboratory test comparisons in: Laboratory Proficiency Testing at: <http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing> see point 1.3

Purpose for inter-laboratory test comparisons ¹	No. participating laboratories	Region(s) of participating OIE Member Countries
Detection of BTV and serotyping in blood samples (Real Time RT-PCR)	19	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East
Detection of BTV antibody in serum samples (c-ELISA)	34	<input type="checkbox"/> Africa <input type="checkbox"/> Americas <input type="checkbox"/> Asia and Pacific <input checked="" type="checkbox"/> Europe <input type="checkbox"/> Middle East

ToR 12: To place expert consultants at the disposal of the OIE

24. Did your laboratory place expert consultants at the disposal of the OIE?

Yes

Kind of consultancy	Location	Subject (facultative)
ad hoc Group	online meeting	BTV surveillance plain

25. Additional comments regarding your report: