The OIE Biological Standards Commission (BSC) met at the OIE Headquarters from 6 to 9 February 2018. Dr Monique Eloit, Director General of the OIE, welcomed the Members of the Commission, Dr Beverly Schmitt, President, Dr Franck Berthe and Dr Hualan Chen, Vice-Presidents, and Dr Peter Daniels, Dr Mehdi El Harrak and Dr Anthony Fooks, members of the Commission.

Dr Monique Eloit reminded the Commission that this was its last meeting before the elections that would be held during the General Session in May, organised in accordance with the new process for selection of experts for Specialist Commissions. She thanked the Commission for its achievements over the past 3 years and wished those members who were standing for re-election the best of luck. As Dr Schmitt is stepping down from her role as President, Dr Eloit wished her a long and happy retirement.

1. **Adoption of Agenda**

   The proposed agenda was presented and adopted.

   The Agenda and List of Participants are given at Annexes 1 and 2, respectively.

2. **Manual of Diagnostic Tests and Vaccines for Terrestrial Animals**

   For this Agenda Item, the Commission was joined by the Consultant Editor of the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual), Dr Steven Edwards.

   2.1. **Update from September meeting: question regarding recommended vaccine dose and frequency for vaccination against brucellosis**

      At its last meeting in September, the Commission referred a question from an epidemiologist on the recommended vaccine dose and frequency of vaccination against brucellosis to the brucellosis network that had updated the chapter adopted in 2016. The network comprises the eight OIE Reference Laboratories for brucellosis and a number of non-OIE laboratories. Reviewing the answers received, it was apparent that there is a difference of opinion between the epidemiologist and the OIE network, including on interpretation of certain published articles. The President of the Commission agreed to review the responses in consultation with experts, and provide a recommendation to the Commission for its next meeting.
2.2. Update from September meeting: review of a validation dossier for a quantitative real-time PCR\(^1\) method for detection of *Taylorella equigenitalis* directly from swabs

At the last meeting in September, the Commission referred a validation dossier for a quantitative real-time PCR method for detection of *Taylorella equigenitalis* directly from swabs to the OIE Reference Laboratories for Contagious equine metritis with the request to evaluate it. The experts found that the dossier had been well prepared to a high standard and that the test showed promise. However, before it could be recommended for inclusion in the *Terrestrial Manual* further validation studies needed to be undertaken in particular to confirm the method’s robustness and reproducibility. The report would be forwarded to the test developers.

2.3. Review of validation study on a real-time RT-PCR\(^2\) for equine influenza diagnoses in horses

The Commission reviewed and accepted the final technical report of the validation study submitted for a real-time RT-PCR for equine influenza. The study was one of a number of equine projects that were part of the OIE public–private partnership with the International Federation of Horseracing Authorities (IFHA) and the International Equestrian Federation (FEI). The Commission proposed that the *Terrestrial Manual* chapter be updated to include the primer sets and cycling parameters, and reviewed by all the OIE Reference Laboratories for equine influenza. The Commission also encouraged the study’s author to submit the study for publication in a peer-reviewed journal so that a reference could be added to the chapter.

2.4. As cysticercosis caused by *Taenia solium* is an OIE listed disease, should a specific chapter on *T. solium* be developed for the swine diseases section of the *Terrestrial Manual*?

The Commission was reminded that cysticercosis caused by *Taenia solium* is an OIE listed disease, but that the *Terrestrial Manual* chapter is in Section 2.9 Other diseases and covers more than just infection with *T. solium*. The question was raised therefore, should an individual chapter on cysticercosis caused by *T. solium* be drafted for the Section 2.8 [diseases of] *Suidae*. Since the current chapter was adopted in 2014, there has been progress in diagnostics and vaccines and a number of contacts have been made with experts from the European Network on Taeniosis/Cystercerosis (Cystinet) who would be willing to assist with drafting or reviewing a chapter. The Commission decided to keep the chapter in Section 2.9 but to expand its title to: Cysticercosis (including infection with *Taenia solium*) and to ask the experts from Cystinet to review and update the whole chapter and in particular to expand the section on *T. solium*.

2.5. Review of Member Country comments received on draft chapters and their endorsement for circulation for second-round comment and proposal for adoption in May 2018

Member Country comments had been received from Argentina, China (People’s Rep. of), EU\(^3\), FAO\(^4\), JAC\(^5\), Japan, Singapore, Switzerland, Thailand, and United States of America. The Commission reviewed 29 draft chapters and the glossary and approved them all for circulation, some subject to clarification of certain points by the experts, for second-round Member Country comment and eventual proposal for adoption by the Assembly in May 2018.

Member Countries are reminded that they should submit the rationale for all their proposed changes to the texts, and include references where relevant for the Commission to consult.

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1. PCR: polymerase chain reaction
2. RT-PCR: reverse-transcriptase PCR
3. EU: European Union
4. FAO: Food and Agriculture Organization of the United Nations
5. JAC: FAO-OIE Joint Advisory Committee for Rinderpest
A number of Member Countries had requested the addition of new references to support minor statements. The Commission emphasised that the Terrestrial Manual is not intended to provide comprehensive reviews of the literature, but rather to provide key, up-to-date references as an entry point to the literature for those who wish to study further. With this in mind, the Commission did agree to replace old review articles with newer more up-to-date review articles.

At its last meeting in September 2017, the Commission considered deleting Chapter 2.8.2 Atrophic rhinitis of swine as the disease is not listed by the OIE and there is no OIE Reference Laboratory dedicated to this minor disease. However, one Member Country was in favour of keeping the chapter as it can be useful for diagnostic laboratories. The Commission therefore agreed to keep the chapter in the Terrestrial Manual.

In accordance with the procedure for handling more transparently comments from Member Countries and Experts on draft chapters, endorsed by the Commission in September 2017, a traceability table showing chapter by chapter, the actions decided on by the Commission in response to Member Country or expert comments can be found at Annex 3.

2.6. Late Member Country comment on the chapter on foot and mouth disease

A Member Country had submitted late comments on the chapter on foot and mouth disease that had been circulated in October 2016 and adopted in May 2017. These comments were too late to be taken into account, but the Member Country would have the opportunity to comment on future revisions of the chapter. The Commission noted however, that one of the comments referred to “OIE requirements for containment group 4 pathogens”. The Commission would like to draw the Member Country’s attention to Chapter 1.1.4 Biosafety and biosecurity: standard for managing biological risk in the veterinary laboratory and animal facilities, adopted in May 2015. The chapter describes the risk analysis approach to the management of biological risks, which has been adopted by the OIE replacing categorisation of pathogens into containment groups.

2.7. Inclusion in the relevant disease chapter a standard sentence referring to diagnostic kits that have been adopted and added to the OIE Register

The Commission agreed that when a kit is adopted by the Assembly and added to the OIE Register, a standard sentence should be added to the relevant Terrestrial Manual disease chapter referring to the kit. For example, the following sentence is included in the chapter on contagious equine metritis, which was approved for circulation for second-round comment: “It is important that kits used have been fully validated in accordance with Chapter 1.1.6. Principles and methods of validation of diagnostic assays for infectious diseases. Kits should preferably be selected from those listed on the OIE Register (http://www.oie.int/en/our-scientific-expertise/certification-of-diagnostic-tests/the-register-of-diagnostic-tests/).” The sentence would be removed should the kit be removed from the register.

2.8. Update of Chapter 3.1. Laboratory methodologies for bacterial antimicrobial susceptibility testing: may require an ad hoc Group

In view of the increasing importance of the work currently been undertaken in the field of antimicrobial resistance, it has become apparent that Chapter 3.1. Laboratory methodologies for bacterial antimicrobial susceptibility testing needs to be both updated and expanded, for example to include information on what is considered to be a susceptible or a resistant pathogen and what are the priority pathogens for each species. To assist in this task the Commission recommended that the Director General consider convening an ad hoc Group of experts.

3. OIE Reference Centres

3.1. Annual reports of Reference Centre activities in 2017

As of 21 February 2018, 219 out of 228 (96%) Reference Laboratories and 48 out of 53 (91%) Collaborating Centres had submitted annual reports for 2017 to the OIE.

The activities relevant to the Terms of Reference of OIE Reference Centres for terrestrial animals are summarised in the following graphics.
2017 OIE Reference Laboratory Activities

1. Tests in use
   2a. Production of OIE recognised standard reference reagents (95%)
   2b. Supply of standard reference reagents (66%)
   3. Production/supply of diagnostic reagents other than OIE-approved (66%)
   4. Production of vaccines (2%)
   5. Supply of vaccines (21%)
   6. Development of new diagnostic methods (16%)
   7. Development of new vaccines (3%)
   8. Provision of diagnostic testing (47%)
   9. Provision of expert advice in technical consultancy (60%)
   10. Participation in international scientific collaborative studies (58%)
   11. Collection of epizootiological data (65%)
   12. Dissemination of epizootiological data (69%)
   13. Method of dissemination of information (88%)
   14. Provision of scientific and technical training (56%)
   15. Maintenance of quality management system according to int’l standards (73%)
   16. Accreditation by an international accreditation body (87%)
   17. Maintenance of biosafety and biosecurity (87%)
   18. Organisation of international scientific meetings (88%)
   19. Participation in international scientific meetings (74%)
   20. Exchange information with other OIE labs (73%)
   21. Proficiency testing with other OIE labs (39%)
   22. Collaboration with other OIE laboratories for same disease (57%)
   23. Proficiency testing labs other than OIE labs (3%)
   24. Provision of consultant expertise (12%)

2017 Collaborating Centre Activities

1. Activities within the sphere of competence (100%)
2. International harmonisation of regulations (75%)
3. Maintenance of a network in same specialty (84%)
4. Maintenance of a network in other disciplines (88%)
5. Provision of consultant expertise (80%)
6. Provision of scientific and technical training (74%)
7. Organisation of international scientific meetings (91%)
8. Coordination of scientific and technical studies (40%)
In May 2017, the *Procedures for designation of OIE Reference Laboratories* (the SOPs\(^6\)) were adopted by Resolution of the Assembly and made available online\(^7\). The Commission began the procedure of implementing the SOPs by evaluating the reports against the performance criteria.

The first criterion is lack of submission of an annual report. In a first step and in accordance with the SOPs, all 9 laboratories that had not submitted their annual report by the end of the Commission’s meeting will be sent a letter of reminder, with the Delegate of the host Member Country in copy, to submit the report by an extended and prescribed deadline. Further communication may be necessary, addressed directly to the Delegate. If necessary, the final recommendation to de-list the laboratory would be taken by the Commission at the September meeting (see SOPs for details).

The second criterion concerns accreditation to ISO 17025 or equivalent quality management system. The deadline for achievement of such accreditation had passed (31 December 2017). In accordance with the SOPs, laboratories that had not achieved accreditation would have their OIE Reference Laboratory status suspended with the possibility to reinstate it within 2 years should they achieve accreditation in that time. Laboratories that have still not achieved accreditation 2 years after suspension would have to re-apply for OIE Reference Laboratory status once accreditation is achieved. The Commission identified 20 laboratories for suspension. These laboratories would receive a letter from the Director General of the OIE explaining the decision and procedure and emphasising the importance and benefit of having an accredited quality management system, particularly for confidence in test results.

The third criterion covers lack of activity. An external consultant had been engaged to examine the reports in detail and submit a report of his findings and recommendations regarding individual laboratories. His report, which would also include a review of the contents of the quality management system certificates, would be reviewed by the Commission at its September meeting.

The fourth criterion, no response to requests from the OIE Headquarters for scientific expertise, will be applied on a continual basis.

And finally, those Reference Laboratories that do not provide or renew the declaration of interest form or provide a confidentiality undertaking, would be reminded of this obligation.

With regard to the second performance criteria, the Commission, in consultation with the Aquatic Animal Health Standards Commission, recommended that the SOPs be reviewed and possibly updated at some time in the future to move to accreditation of relevant tests for the named disease in the scope of the accreditation certificate.

### 3.1.1. Possibility to upload final reports of proficiency tests

In response to a proposal to amend the template for annual reports of OIE Reference Laboratories to allow the final report of proficiency tests to be uploaded, the Commission pointed out that organisation of and participation in proficiency tests is an integral part of the ISO 17025 accreditation and is also included in the Terms of Reference for OIE Reference Laboratories. Whether a laboratory has made appropriate responses to its reports of participation in proficiency test rounds will be a consideration in the review of its accreditation by the accrediting authority. The proposal for OIE monitoring of such reports would require a very large number of files being uploaded annually, and the Commission did not see the added value in this endeavour. The Commission therefore did not endorse the proposal.

### 3.1.2. Inclusion of a comment section at the end of Collaborating Centre reports

One of the Collaborating Centres had requested that a question be added to the end of the template for “Additional comments regarding your report” as is the case for the template for Reference Laboratory reports. The Commission agreed with this proposal.

\(^6\) SOPs: Standard Operating Procedures

\(^7\) [http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/ANG_SOP_RL_applications.pdf](http://www.oie.int/fileadmin/Home/eng/Our_scientific_expertise/docs/pdf/ANG_SOP_RL_applications.pdf)
3.2. Applications for OIE Reference Centre status

The Commission recommended acceptance of the following applications for OIE Reference Centre status:

**OIE Reference Laboratory for Chronic wasting disease**
Norwegian Veterinary Institute (NVI), P.O. Box 750 Sentrum, 0106 Oslo, NORWAY
Tel.: (+47) 23.21.60.00
Email: postmottak@vetinst.no ; Website: http://www.vetinst.no
Designated Reference Expert: Dr Sylvie L. Benestad.

**OIE Reference Laboratory for Salmonellosis**
Animal and Plant Quarantine Agency (APQA), MAFRA, 177, Hyeoksin 8-ro, Gimcheon-si, Gyeongsangbuk-do, 39660, KOREA (REP. OF)
Tel.: (+82) 54 912.0818
Email: kangmskr@korea.kr ; Website: http://www.qia.go.kr
Designated Reference Expert: Dr Min-Su Kang.

An application had been submitted from a country in the Middle East for designation as an OIE Reference Laboratory for Brucellosis (Brucella abortus, B. melitensis, B. canis). The Commission noted that a twinning project had previously been undertaken for this disease in the country. However, the twinning project had been with laboratories other than the applicant laboratory. Given that the Internal Rules for OIE Reference Laboratories limits Reference Laboratories to one per country per disease, the Commission put the application on hold until confirmation from the Delegate that the applicant laboratory is indeed the one chosen to host an OIE Reference Laboratory has been received.

An application had been received from a European country for designation as an OIE Collaborating Centre for Zoonotic Cestodes. Reviewing the information provided, the Commission found that the activities fit better in the mandate for a OIE Reference Laboratory than for a Collaborating Centre and proposed that the institute amend the document and re-submit it as an application for designation as an OIE Reference Laboratory for Taenia species.

3.3. Changes of experts at OIE Reference Centres

The Delegate of the Member concerned had submitted to the OIE the following nomination for changes of experts at OIE Reference Laboratories. The Commission recommended their acceptance:

* Aujeszky’s disease*
Dr Willie Loeffen to replace Dr Andre T.J. Bianchi at the Wageningen Bioveterinary Research, Lelystad, NETHERLANDS

* African horse sickness*
Dr Simon Carpenter to replace Dr Javier Castillo-Olivares at the The Pirbright Institute, Woking, UNITED KINGDOM

* Bovine spongiform encephalopathy and scrapie*
Dr Fernando Oscar Delgado to replace Dr Francisco Javier Blanco Viera at the Instituto Nacional de Tecnología Agropecuaria (INTA), Buenos Aires, ARGENTINA

* Anthrax*
Dr Kingsley Amoako to replace Dr Elizabeth Golsteyn-Thomas at the Canadian Food Inspection Agency, Lethbridge Laboratory, CANADA

* Salmonellosis*
Dr Gitanjali Arya to replace Dr Cornelis Poppe at the Public Health Agency of Canada, Laboratory for Foodborne Zoonoses, Guelph, CANADA

* Classical swine fever*
Dr Aruna Ambabagala to replace Dr John Pasick at the Canadian Food Inspection Agency, National Centre for Foreign Animal Disease, Winnipeg, CANADA

* Highly pathogenic avian influenza*
Dr Yohannes Berhane to replace Dr John Pasick at the Canadian Food Inspection Agency, National Centre for Foreign Animal Disease, Winnipeg, CANADA
**Theileriosis**
Dr Alessandra Torina to replace Dr Santo Caracappa at the Istituto Zooprofilattico Sperimentale della Sicilia (IZSSI), Palermo, ITALY

**Bluetongue, Equine infectious anaemia, Equine encephalomyelitis (Eastern, Western, Venezuelan), West Nile fever**
Dr Tracy Sturgill Samayoa to replace Dr Eileen Ostlund at the NVSL, Ames, Iowa, UNITED STATES OF AMERICA

**Rabies**
Dr José Alvaro Aguilar Setién to replace Dr Juan Antonio Montañó Hirose at the Servicio Nacional de Sanidad, Inocuidad y Calidad Agroalimentaria, MEXICO

**Aujeszky’s disease, vesicular stomatitis, swine influenza**
Dr John Schiltz to replace Dr Sabrina Swenson at the NVSL, Ames, Iowa, UNITED STATES OF AMERICA

### 3.4. Review of new and pending applications for laboratory twinning

Dr Gounalan Pavade from the OIE Programmes Department updated the Commission on the OIE Laboratory Twinning programme. As of January 2018, 43 projects have been completed, 34 projects are underway and 7 are awaiting funding before beginning.

Two new twinning proposals were presented to the Commission for technical review.

i) **France – Chinese Taipei** for rabies: the Commission supported the technical contents of this project and recommended that the laboratories should apply the biosafety and biosecurity standards for managing biological risk in the veterinary laboratory and animal facilities as outlined in Chapter 1.1.4 of the *Terrestrial Manual*.

ii) **Italy – Ethiopia** for contagious bovine pleuropneumonia: the Commission supported the technical contents of this project and recommended that the work plan clearly define how the quality management system of the Ethiopia laboratory will be improved by this twinning collaboration.

### 3.5. Request from an OIE Reference Laboratory to list its diagnostic component separately on the OIE website

An institution that hosts three OIE Reference Laboratories and that has a subcontracting arrangement with an on-site diagnostic facility to undertake all the Reference Laboratories diagnostic activities, requested that this component be listed jointly with the Reference Laboratories on the OIE website. The Commission pointed out that OIE Reference Laboratories have just one named contact point (the designated expert) and that adding a second could cause confusion for Member Countries and website users. The Commission therefore did not agree to the request.

### 3.6. Follow-up actions taken by the candidate laboratory in response to the mission report

At the last meeting in September 2017, the Commission reviewed a report of the follow-up actions taken by an institute that had applied to be recognised as OIE Reference Laboratories for Avian influenza and Newcastle disease in response to an expert mission report. The Commission recommended that certain specific aspects of laboratory biological risk management be assured.

The candidate laboratory provided the following assurances:

> “Biosafety provisions and veterinary and sanitary standards are established by the Federal Law of the Russian Federation and are an essential part of the basic quality management system documentation in the Centre: management, instructions, documented procedures, SOPs that regulate all biosafety aspects of the laboratory including lists of microorganisms and their pathogenicity group, requirements for rooms, equipment and individual protection means, personnel, production safety and health measures during handling pathogens (sample receipt and transfer, testing, storage, disposal, etc.).”
Full biosafety measures are implemented, scheduled and unscheduled inspections are conducted at the FGBI “ARRIAH”. The Centre is provided with all necessary documents required by the federal legislation for handling pathogenic biological agents.”

In light of this response, the Commission recommended acceptance of the application for OIE Reference Centre status:

OIE Reference Laboratories for Highly pathogenic avian influenza and low pathogenic avian influenza (poultry) and Newcastle disease
Federal Centre for Animal Health (FGBI-ARRIAH), 600901 Yur’evets, Vladimir, RUSSIA
Tel: +7-0922 26.38.77; +7-0922 26.06.14
Email: mail@arriah.ru; irza@arriah.ru
Designated Reference Expert: Dr Victor N. Irza.

● Reference Laboratories

3.7. Implementing the performance criteria: identification of noncompliant Reference Laboratories

See Agenda Item 3.1 above.

● Collaborating Centres

3.8. Further review and finalisation of the procedures for approval and maintenance of Collaborating Centre status

At its last meeting in September 2017, the Commission had further developed and refined a list of main focus areas, each with a number of specialties, for future applicants for OIE Collaborating Centre activities (see Annex 3 of the September 2017 report). The draft list was submitted for approval to the other OIE Specialist Commissions.

Once the list is finalised and approved it will be made available on line. From that point, all future Collaborating Centre applicants will choose their specialty or specialties within one of the focus areas from this list. Existing Collaborating Centres will be sent a letter to alert them to these new developments. They will be asked where their core activities and expertise lies within this list so that they can retain their designation, when relevant by forming a consortium with Centres having the same specialty in the same region with the aim of having within 2–3 years, only OIE Collaborating Centres for defined focus areas of strategic interest to the OIE, creating greater opportunities for collaboration and networking.

In continuation of its in-depth reflection on this subject matter, the Commission reviewed a draft document entitled Procedures for designation of OIE Collaborating Centres. The purpose of the document, which is similar to the SOPs for Reference Laboratories, is to have clear criteria and procedures for designation, maintenance and de-listing OIE Collaborating Centres. The document outlines the steps that need to be followed by applicants for OIE Collaborating Centre status, the roles of the Specialist and Regional Commissions, the Council and the Assembly. The SOPs incorporate the Guidelines for applicants for OIE Collaborating Centre Status that had been amended at the September 2017 meeting (see Annex 4 of the September 2017 report), and refer to the need to form or be designated as consortia should there be more than one Collaborating Centre on the same focus area in the same region. As with applications for Reference Laboratory status, the deadline for submission of the dossiers has been set at 45 days before the scheduled Specialist Commission meetings.

For OIE Collaborating Centre applications, there are two OIE Specialist Commissions that oversee the designation process: Biological Standards Commission and Aquatic Animal Health Standards Commission for topics relating to terrestrial and aquatic animals, respectively. Depending on the proposed focus area or specialty, these Commissions would solicit one or both of the other Specialist Commissions: Scientific Commission for Animal Diseases, and Terrestrial Animal Health Standards Commission, for an opinion.
The Commission identified five performance criteria for Collaborating Centre evaluation:

i) the lack of submission of an annual report;

ii) no response or progress on specific collaboration projects;

iii) a pattern revealing lack of participation in the network or lack of activity regarding the 5-year work plan as indicated in the annual report;

iv) no response to requests from the OIE Headquarters for scientific expertise (e.g. inquiry of technical advice from OIE Member Countries, revision of OIE Standards, etc.).

v) noncompliance with administrative obligations relating to transparency and confidentiality (e.g. not renewing the potential conflict of interests declaration or providing a confidentiality undertaking [(cf. Appendices 2 and 3)].

Point ii refers to the possibility for new applicants to develop a specific proposal for collaboration in one of the focus areas and based on their specialty, aligned with the OIE Strategic Plan (see Agenda Item 3.6 of report of the Biological Standards Commission meeting, September 2017).

The document stipulates that Centres will be requested to submit a summary of their achievements at the end of the 5-year designated period and a proposal for the activities for the forthcoming 5 years.

Finally the document also states that Collaborating Centres may be proposed for delisting if the need for the specific topic activities is no longer required. Such proposals would be submitted to the Council and the Regional Commission and must finally be adopted by Resolution of the Assembly.

Following comment and review, all four Specialist Commissions approved the document, which can be found at Annex 4. The document will be presented to the OIE Council before being presented for adoption by Resolution of the World Assembly at the General Session in May 2018.

3.9. OIE Collaborating Centre for Laboratory Biorisk Management: review of strategic plan

The Commission noted with interest the strategic plan submitted by the OIE Collaborating Centre for Laboratory Biorisk Management hosted by Sandia National Laboratories, Albuquerque, USA. The Commission welcomes all initiatives that help promote and consolidate standards as published in the Terrestrial Manual.

4. Ad hoc Groups

- Update on activities of past ad hoc Group meetings

4.1. Ad hoc Group on Replacement of the International Standard Bovine Tuberculin

The OIE ad hoc Group on Replacement of the International Standard Bovine Tuberculin (ISBT) is coordinating a project to develop and validate a new ISBT. The Group met by teleconference on 6 December 2017 to review the current status of the ISBT replacement project, confirm some aspects of the experimental design and analysis, and plan the upcoming Preliminary Evaluation (PE) and International Collaborative Study (ICS).

The National Institute for Biological Standardisation and Control (NIBSC) has prepared lyophilised samples of two candidate tuberculins, which had been selected for laboratory evaluation. The PE is scheduled to be conducted from February to June 2018 in two OIE Reference Laboratories for bovine tuberculosis (France and Argentina). The International Collaborative Study (ISC) is scheduled to be conducted from July 2018 to June 2019, in approximately 10 locations.

If the testing can be completed as anticipated and the data is satisfactory, the results would be analysed and reported to the Biological Standards Commission for endorsement at the February 2020 meeting and subsequently presented to the OIE Delegates for endorsement and adoption of the new ISBT at the OIE General Session in May 2020. The data would be submitted for publication in a peer reviewed journal, and the new ISBT would be available from the NIBSC by December 2020.
● Proposed future *ad hoc* Groups

4.2. *Ad hoc* Group on Veterinary Biobanking

Dr Antonino Caminiti from the Science and New Technologies Department of the OIE updated the Commission on the progress that had been made with the project to develop an OIE Virtual Biobank. Dr Caminiti shared with the Commission the first draft proposal for the pilot phase of the project, which was submitted by the Istituto Zooprofilattico Sperimentale della Lombardia e dell’Emilia (Brescia, Italy), OIE Collaborating Centre for Veterinary Biologicals Biobank.

The first step of the pilot phase includes the draft of the full project proposal, including a project governance model, which will be done by the Collaborating Centre in collaboration with the OIE. In parallel, the OIE will select a core group of OIE Reference Laboratories that will refine the metadata scheme and quality requirements drafted by the *ad hoc* Group on Veterinary Biobanking, and test the information system functionalities (e.g. data upload, sample request, etc.). Regarding the selection process, the Commission advised to give priority to the OIE Reference Laboratories that are already providers of OIE-approved reference reagents, regardless of their geographical location or expertise.

4.3. *Ad hoc* Group on High Throughput Sequencing and Bioinformatics and Computational Genomics (HTS-BCG)

Dr Caminiti updated the Commission on the progress that had been made with the project to develop an OIE Genomic Platform. The platform is a web-based system for the collection of genetic sequences of pathogens that have been the subject of notifications to the OIE. He informed the Commission that the OIE submitted a preliminary application to the Wellcome Trust (United Kingdom) for funding for the pilot phase of the project. The objective of the pilot phase is to test the core system functionalities and sequence data exchange between the OIE, OIE Reference Laboratories and OIE Focal Points. The application has been made in partnership with the OIE Collaborating Centre for Viral Genomics and Bioinformatics, Centre for Viral Research (University of Glasgow, United Kingdom), which represents the lead applicant. The content of the application included background information, the project’s rationale and governance, the main objectives, and a preliminary budget. The disease models proposed were bluetongue, rabies, peste des petits ruminants (PPR), Rift Valley fever, and African horse sickness. The last three diseases replaced avian influenza, which was initially included in the pilot phase, but which had been excluded because it would have added an unnecessary burden of data collection in the first phase of the project. PPR was suggested because it is among the high-priority diseases identified by OIE Member Countries. In this regard, the OIE has recently launched a global campaign to eradicate PPR by 2030 in partnership with FAO. Rift Valley fever and African horse sickness were selected because of the expertise and experience of the OIE Collaborating Centre’s staff in working with these diseases. In addition, African horse sickness virus shares significant genetic similarity with bluetongue virus, and this would facilitate the task of the OIE Genomic Platform developers. The evaluation of the preliminary application by the Wellcome Trust is expected by February 2018. In case of a positive feedback, the full application will be submitted in April 2018.

4.3.1. Definition of business processes, operations and main technical specifications of the OIE platform

The Commission was informed that this activity will be addressed in future *ad hoc* Group meetings, pending the decision of the Wellcome Trust to fund the pilot phase of the OIE Genomic Platform project.

4.3.2. Development of sub-modules for the diseases that have been selected for the pilot phase of the OIE platform project

See Agenda Item 4.3.1 above.
5. International Standardisation/Harmonisation

- Diagnostic tests

5.1. OIE Register of diagnostic kits

5.1.1. Update and review of applications

The Commission was updated on the currently registered kits, and new applications that have been submitted to the OIE Procedure for Registration of Diagnostic Kits. There are currently 11 diagnostic kits listed in the OIE Register of Diagnostic Kits, and four under review or scheduled to begin. Manufacturers pay an annual fee at the beginning of each year to maintain the registration. The fees are based on the sales for the previous year. The registrations are renewed every 5 years following a proposal from the Biological Standards Commission or the Aquatic Animal Health Standards Commission, and approved by Resolution that is presented to the General Session.

Four kits are scheduled for renewal of their registration in 2018.

A manufacturer of a currently registered diagnostic kit had contacted the OIE to request approval of proposed changes to the kit’s composition and directions for use. After considering the proposed changes, and concluding that the changes could significantly alter the performance of the kit, the Commission decided that the manufacturer’s technical information should be forwarded to a panel of experts for review and recommendation.

5.2. Standardisation programme

5.2.1. Update on progress on developing guidelines for the preparation and validation of International Reference Standards for Polymerase Chain Reaction assays

At its last meeting in September 2017, the Commission decided to forward the draft guideline entitled *International Reference Standards for Polymerase Chain Reaction assays* to the OIE Collaborating Centre for Biotechnology-based Diagnosis of Infectious Diseases in Veterinary Medicine and then to certain OIE Reference Laboratories for further review. A number of comments and proposed amendments had been received and were addressed by the expert who had drafted the guideline. The Commission members then reviewed, finalised and endorsed the document, which can be found at Annex 5 and would be uploaded to the OIE website.

5.2.2. Update on project to extend the list of OIE-approved reference reagents

Dr Caminiti updated the Commission on the progress that had been made with the project to extend the list of OIE-approved reference reagents. Following the advice of the Commission at the last meeting in September 2017, a letter has been sent to all the OIE Reference Laboratories with the aim of encouraging them to submit potential candidates to become OIE-approved standard reagents. A table summarising the laboratories’ replies had been prepared. The OIE Reference Laboratory for Trichinellosis in Italy provided comprehensive information on a set of reference sera for *Trichinella* detection. The Commission invited the OIE Reference Laboratory to liaise with the other OIE Reference Laboratory for Trichinellosis with the aim of organising a proficiency test and endorsing the sera as OIE-approved International Reference Standards.
5.2.3. **EDQM** project to establish a biological reference preparation to allow testing of equine influenza vaccines for compliance with the recommendations of the EI Expert Surveillance Panel on vaccine strains: final report

The Commission reviewed the final report of this project provided by the EDQM, and decided to include the reagent in the list of OIE-approved international standard reagents. Currently, the EDQM supplies antisera for four different equine influenza strains. The current format of the webpage for OIE-approved reference reagents on the OIE website does not allow the addition of this and other kinds of information. The implementation of an OIE Virtual Biobank will help to overcome this problem.

5.2.4. **Serum products:** ISIA\(^8\) proposal to develop standard sera and ESPA\(^9\) proposal to develop international trade standards for animal serum products used in culture media

The Commission received a request from the ISIA, proposing that the OIE should develop standards for traceability and testing for sterility for serum products. The Association reviewed relevant chapters of the *Terrestrial Manual* and *Terrestrial Code* and concluded that a more detailed approach would be needed to address these specific issues. The Commission received a similar request from the ESPA proposing that the OIE should develop international trade standards for a specific category of serum products, namely the “animal serum products used in culture media”, which is not currently listed as a distinct commodity in the *Terrestrial Code*. The ESPA claimed that the lack of such standards led OIE Member Countries to create import requirements that are unjustified as the risk that animal serum would contain pathogens is lower than in other products of animal origin. The Commission considers that *Terrestrial Manual* Chapter 1.1.9. *Tests for sterility and freedom from contamination of biological materials intended for veterinary use* already takes into account the concerns raised by the associations, and that the specific issues related to traceability of serum products could be addressed in the next update of the chapter instead of creating a new chapter.

6. **Resolutions for the General Session**

6.1. **Resolutions to be proposed by the Biological Standards Commission for adoption in May 2018**

The Commission noted that the following resolutions would be proposed for adoption at the General Session in May 2018:

- A resolution proposing the adoption of the 29 draft chapters and the updated glossary for the *Terrestrial Manual*;
- A resolution proposing the new OIE Reference Laboratories;
- A resolution proposing the renewal of four already registered kits;
- A resolution proposing adoption of the *Procedures for designation of OIE Collaborating Centres* (SOPs).

7. **Conferences, Workshops, Meetings**

- **Past Conferences, Workshops, Meetings**

7.1. **Update on Second OIE Global Conference on Biological Threat Reduction, Ottawa, Canada 31 October – 2 November 2017**

The Second OIE Global Conference on Biological Threat Reduction had been held in Ottawa from 31 October to 2 November 2017. Over 300 participants from 70 countries attended the conference. The conference had four themes: Current developments in non-proliferation instruments and global security initiatives; global conversations on the use of technologies; assessing systems, investing in collaboration to foster preparedness and future of biological threat reduction. The final report on the conference, 12 recommendations that were adopted by the participants as well as the presentations are posted on the website: [http://www.oie.int/eng/BIOTHREAT2017/presentation_poster_recom.htm](http://www.oie.int/eng/BIOTHREAT2017/presentation_poster_recom.htm)

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\(^8\) EDQM: European Directorate for the Quality of Medicines  
\(^9\) ISIA: International Serum Industry Association  
\(^10\) ESPA: European Serum Product Association
7.2 Update on VICH\textsuperscript{11} Steering Committee meeting, Tokyo, Japan, 14–15 November 2017

At the last VICH Outreach Forum meeting in Tokyo, Japan, which took place from 14 to 15 November 2017, Dr Mária Szabó updated the Steering Committee on the Biological Standards Commission’s work related to vaccines: that **Terrestrial Manual** Chapter 1.1.9 had been adopted and was available online, that the decision to include a note in **Terrestrial Manual** chapters that target animal batch safety testing could be eliminated in situations where other quality control measures are in place was being implemented, and that the OIE was working on a new definition of thermotolerance in reference to vaccines. It is hoped that the VICH Steering Committee will take chapter 1.1.9 into consideration when drafting the future guideline on *Extraneous agents testing for Biologicals*.

The Focal Points for Veterinary Products were also updated on these matters during their recent training Seminars: for Middle East: Beirut (Lebanon), 7–9 November 2017; for English-speaking African countries: Ezulwini (Swaziland), 6–8 December 2017; for French-speaking African countries: Abidjan (Cote D’Ivoire), 13–16 January 2018.

- **Future Conferences, Workshops, Meetings**

  7.3. **Consultation on Sustainable Biosafety and Biosecurity in Laboratories, 1–2 March 2018**

Concerns had been raised about the lack of sustainability of laboratory systems in different parts of the world and the potential negative impact on biosafety and biosecurity, particularly for laboratories handling high consequence pathogens. The OIE will be hosting a meeting on sustainable laboratory biosafety and biosecurity on 1–2 March 2018. The meeting will be held in collaboration with Chatham House and the WHO\textsuperscript{12}. Its aim is to put laboratory biosafety and biosecurity in the broader context of the sustainability of laboratory systems and to look for solutions to improve sustainability. The meeting will also aim to consider the evidence base for biosafety and biosecurity procedures, supporting the biorisk management approach to biosafety and biosecurity that had recently been adopted by the OIE and the WHO for laboratories. The meeting will be held thanks to financial support from the Weapons of Mass Destruction Threat Reduction Program, Global Affairs Canada.

7.4. **Workshop on Bridging Epidemiology and Forensics, Paris, 13–15 March 2018**

The OIE *ad hoc* Group on Biological Threat Reduction was established to develop guidelines for the identification of biological events that are of confirmed deliberate origin or are suspected to be of deliberate origin along with the issues related to the investigation of such events (see Agenda Item 9.10). As a continuation of the work on the guidelines, an international workshop on ‘Bridging Epidemiology and Forensics’ will be held in Paris, 13–15 March. The workshop participants will be invited to review the guidelines and to jointly develop a way forward by outlining a framework for implementation and table-top exercises.

7.5. **2nd OIE Global Conference on Antimicrobial Resistance and the Prudent use of Antimicrobials in Animals, 29–31 October 2018**

Dr Elisabeth Erlacher-Vindel informed the Commission that the Second OIE Global Conference on Antimicrobial Resistance and the Prudent use of Antimicrobials in Animal will be held in Marrakesh, Morocco, from 29 to 31 October 2018. In accordance with the Concept Note, which had just been finalised, the focus would be on what Member Countries need to do to implement OIE Standards, particularly those in the *Terrestrial Code*.

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\textsuperscript{11} VICH: International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Products

\textsuperscript{12} WHO: World Health Organization
8. Liaison with other Commissions

8.1. Horizontal issues among the Specialist Commissions

8.1.1. ToRs\(^{13}\) for an ad hoc Group on MERS-CoV\(^{14}\) to draft a Terrestrial Manual chapter

Dr Gounalan Pavade from the OIE Programmes Department provided an update on the FAO-OIE-WHO Global Technical Meeting on MERS-CoV held from 25 to 27 September 2017, at the WHO Headquarters in Geneva, Switzerland. The Tripartite meeting was attended by representatives from Ministries of Health and Agriculture, MERS-CoV subject-matter experts and researchers, funders and industrial partners. The meeting reviewed the latest scientific findings of MERS-CoV, and identified gaps and opportunities for coordinated activities, and agreed on action points for collaboration. Technical issues of disease control and prevention including vaccination options in camels and humans were discussed. The finalised meeting report will be posted on the OIE website.

A proposal to convene the ad hoc Group on MERS-CoV to draft a Terrestrial Manual chapter was presented to the Commission for comment. The proposal consisted of detailed ToRs for the Group and the provisional list of names of experts. The Commission supported the proposal and suggested including in the ToRs a review of animal vaccines and vaccination strategies as intervention measures based on recent research findings.

8.1.2. Report of the meeting of the ad hoc Group on avian influenza

Dr Peter Daniels, member of the Commission, gave an update on this ad hoc Group meeting. The Group had been convened because it had been brought to the attention of the OIE that certain Member Countries were using their interpretation of the Terrestrial Code Chapter 10.4 Infection with avian influenza viruses to impose trade restrictions. One of the main items that the Group examined in the chapter was the definitions of avian influenza (AI) and of poultry. The Group made a number of recommendations for Member Country comment, and could meet again in 2018.

8.2. Scientific Commission for Animal Diseases

Matters from the Scientific Commission for Animal Diseases to the Biological Standards Commission

None at this meeting.

8.3. Terrestrial Animal Health Standards Commission

Matters from the Terrestrial Animal Health Standards Commission to the Biological Standards Commission

The Biological Standards Commission provided the following advice to the Code Commission on technical comments from OIE Members on draft Terrestrial Code chapters.

8.3.1. Member Country comments on Chapter 8.3. Infection with bluetongue virus

To respond to a Member Country comment, the Code Commission asked for a definition of “semen collection”. The Biological Standards Commission stated that semen collection means collection activities conducted on a single animal in a 1-day period.

The Biological Standards Commission noted that in Article 8.3.1 point 1, the word “sample” should be replaced by the word “specimen”.

\(^{13}\) ToRs: Terms of Reference

\(^{14}\) MERS CoV: Middle-East Respiratory Syndrome Coronavirus
8.3.2. Chapter 8.11. Infection with *Mycobacterium tuberculosis* complex (inclusion of tests on camelids and goats)

The Biological Standards Commission noted the request from the Code Commission to revise the Terrestrial Manual chapter on tuberculosis to include tests on camelids and goats. The three OIE Reference Laboratory experts on bovine tuberculosis are currently revising the chapter, which is in urgent need of an update having last been adopted in 2009. They would be asked for an update on their progress with the revision, and asked at the same time to include test on camelids and goats.

8.3.3. Member Country comments on Chapter 8.16. Infection with rinderpest virus (Article 8.16.2.)

A Member Country had proposed adding “from infected animals” after the words “sera and other clinical-pathological material” in the chapter’s definition of rinderpest-containing material. The Biological Standards Commission agreed with the proposal stating that material should not be considered rinderpest-containing material until a diagnostic test confirms that it is positive for RPV.

To address concerns that the current version of the definition of rinderpest virus containing material, which includes “laboratory-generated material containing live virus,…” may not cover diagnostic kits produced by pharmaceutical companies, the Biological Standards Commission proposed deleting the word “laboratory” from “laboratory-generated diagnostic material containing live virus,…”.

Finally, the Biological Standards Commission noted that the purpose of this review process is to improve clarity and that any amendments proposed should minimise divergence from the original definition and remain focused on the intention in the request for amendment from the JAC.

8.3.4. Member Country comments on Chapter 8.X. New chapter on infection with *Trypanosoma evansi* (non-equine surra)

A Member Country had proposed adding a long list of individual animal species taken from a review article to the definition of “susceptible animals” in Article 8.X.1 of the draft new Terrestrial Code chapter infection with *Trypanosoma evansi* (non-equine surra). The Biological Standards Commission felt that the original text is sufficiently comprehensive, covering animals epidemiologically known to be susceptible to this infection and that the Member Country should provide peer-reviewed references to justify their suggested inclusions.

A Member Country had proposed adding “on the mouthparts of” replacing “in” twice in the sentence: “*T. evansi* can survive for up to 72 hours in on the mouthparts of *Stomoxys* flies and for up to six hours in on the mouthparts of tabanids.” The Biological Standards Commission agreed with this proposal.

In response to a Member Country question on the current availability of relevant diagnostic tests for *T. evansi* in the Terrestrial Manual, the Biological Standards Commission stated that a group of experts has been tasked with drafting chapters on Infection with trypanosome evansi (non-equine surra) and Infection with *Trypanozoon* in equids (dourine, equine surra). Should the drafts be endorsed by the Commission at its next meeting in September, they could be circulated for first-round Member Country comment in October 2018.

Finally, the Biological Standards Commission agreed to seek the opinion of a Reference Laboratory expert on the incubation period of *T. evansi* in equids and camels.
8.3.5. **Member Country comments on Chapter 11.12, Infection with *Theileria annulata*, *T. orientalis* and *T. parva* (bovidae)**

The Biological Standards Commission is in favour of including subspecies in the *Terrestrial Manual* chapters where information is available and useful, for example the addition of melioidosis to the chapter on glanders. The current draft *Terrestrial Manual* chapter on Theileriosis, which at this meeting had been approved to be sent for second-round comment and proposal for adoption in May 2018, refers to *T. orientalis* and *T. buffeli*, but it does not yet include diagnostic tests that conclusively differentiate the subspecies. The Commission agreed to review and update the chapter once suitable validated tests are available.

The Biological Standards Commission referred a number of the other questions, for example questions on listing criteria, to the Scientific Commission for Animal Diseases as they fall within that Commission’s domain.

8.3.6. **Member Country comments on Chapter 12.3, Infection with Trypanozoon in equids (dourine, equine surra)**

A Member Country had queried the incubation period for infection with Trypanozoon in equids given in the *Terrestrial Code* chapter, stating that more time is necessary for detection of antibodies. The Biological Standards Commission consulted an expert who advised that horses seroconvert by day 14 after inoculation with the agent that causes dourine.

8.3.7. **Member Country comments on Chapter 14.X, New chapter on infection with *Theileria lestoquardi*, *T. luwenshuni* and *T. uilenbergi* (small ruminants)**

A Member Country asked about the current scope of *Terrestrial Manual* Chapter 2.4.15 *Theileriosis* and whether it covers small ruminant *Theileria* species. The chapter, which is in the [Diseases of] Bovinae Section of the *Terrestrial Manual*, covers mainly *T. parva* and *T. annulata*. The chapter’s introduction includes a brief reference to *T. lestoquardi*, *T. luwenshuni* and *T. uilenbergi*. There is currently no information in the *Terrestrial Manual* on diagnostic tests for these subspecies.

8.3.8. **Member Country comments on Chapter 12.10, Infection with Burkholderia mallei (Glanders)**

The Biological Standards Commission’s opinion was sought on a proposal to convene an ad hoc Group to review the diagnostic tests for glanders. The Commission stated that the *Terrestrial Manual* chapter, which was last adopted in 2015, had been further updated and the draft had been approved at this meeting to be sent for second-round comment and proposal for adoption in May 2018. The Commission believes that the chapter accurately reflects the current situation regarding diagnostic tests for this disease, which require further validation.

8.3.9. **Member Country comments on the Glossary**

The Biological Standards Commission’s opinion was sought on some proposed definitions. For semen collection, the Commission felt that any definition other than the one given could potentially cause problems for the application of diagnostic tests.

The Commission found the definitions for embryo collection (in-vivo), oocyte collection (individual) and oocyte collection (batch) to be good and useful additions to the *Terrestrial Code* glossary. Should the definitions be adopted, the Biological Standards Commission may consider amending *Terrestrial Manual* Chapter 1.1.2 Collection, submission and storage of diagnostic specimens.

The Biological Standards Commission referred a question on the definition of disease to the Scientific Commission for Animal Diseases as it falls within that Commission’s domain.

The Commission did not agree with the proposal to add the word “appropriate” before “vaccine” in the first sentence of the definition of vaccination (“means the successful administration of a vaccine”) because they did not believe it added any clarity.
8.3.10. Member Country comments on Chapter 5.8 International transfer and laboratory containment of animal pathogens

A Member Country had commented that certain issues in the *Terrestrial Code* chapter on International transfer and laboratory containment of animal pathogens would best be covered in the *Terrestrial Manual*. The Biological Standards Commission refers the Code Commission to revised Chapter 1.1.3 Transport of biological materials, which had been approved at this meeting to be sent for second-round comment and proposal for adoption in May 2018, as these issues are covered in it.

8.4. Aquatic Animal Health Standards Commission

None at this meeting.

9. Matters of Interest for Information

9.1. PPR-GEP\(^{15}\) workshop for thermotolerant PPR vaccines

The OIE and FAO jointly hosted a Technical Workshop for Thermotolerant PPR Vaccines. The workshop participants recognised that there is a need to develop protocols and technical standards to objectively document the thermotolerance of the currently available PPR vaccines, as well as to develop and rigorously validate new vaccines with enhanced thermotolerance. The PPR-GEP group had commented that there is a need for the OIE/FAO, in collaboration with AU-PANVAC\(^{16}\), to provide guidance on thermotolerance criteria for vaccines.

The Commission noted that it would be appropriate for the *Terrestrial Manual* to include additional guidance for characterising thermotolerance properties of vaccines, and to highlight the importance of maintaining and monitoring the required cold chain temperatures during storage and transport. The Commission decided to develop draft text that could be included in *Terrestrial Manual* Chapter 1.1.8 *Principles for Veterinary Vaccine Production*, as this chapter is currently under review and scheduled to be circulated to Member Countries for second-round comment prior to the General Session.

9.2. Update on OFFLU\(^{17}\)

Dr Pavade provided an update on the OFFLU activities. A significant amount of genetic and antigenic data on zoonotic avian influenza was shared with WHO at the September 2017 vaccine composition meetings. Sequence data for 341 H5, H7 and H9 viruses and antigenic data for 49 viruses were contributed by animal health laboratories in 36 countries representing Europe, Asia, Africa and the Americas. The Australian Animal Health Laboratory, Geelong, coordinated the annual OFFLU proficiency testing exercise among the ten OIE-FAO Reference Centres and one WHO Collaborating Centre using 15 avian influenza (AI) inactivated panel samples derived from Australia or Asian regions. The exercise provided an opportunity for the participating laboratories to test for strains of AI not usually encountered, and to fine tune their capability. OFFLU experts updated a guidance document that provides information regarding amino acid sequences at the influenza A cleavage sites for assistance in differentiation of low pathogenicity and high pathogenicity AI viruses through molecular analyses. The document has been referred to in the OIE *Terrestrial Manual* chapter on AI. The OFFLU swine influenza experts developed a guidance document to facilitate collection of specimens from swine for detection of influenza A virus by molecular assays or viral isolation. An international project for validation of real-time RT-PCR diagnostic assays for equine influenza in horses was completed in December 2017. Several OFFLU experts participated in an OIE *ad hoc* Group meeting in December 2017 to advise on proposed revision to the *Terrestrial Code* chapter on AI (see Agenda Item 8.1.2.). The OFFLU Secretariat held regular teleconferences among OIE and FAO Reference Centres and national laboratories to share updated situation reports and research data regarding the AI outbreaks.

\(^{15}\) PPR-GEP: Peste des Petits Ruminants Global Eradication Programme

\(^{16}\) AU-PANVAC: Pan African Veterinary Vaccine Centre of African Union

\(^{17}\) OFFLU: Joint OIE-FAO Network of Expertise on Animal Influenza
9.3. **Project to prepare French translations of *Terrestrial Manual* chapters pertaining to vaccines, and to publish an OIE handbook of standards for veterinary vaccines in English, French, and Spanish versions**

The OIE has arranged for a French translation of the vaccine-related chapters from the *Terrestrial Manual*, which were previously only available in English and Spanish. The chapters will be assembled into one document that will be available in English, French, and Spanish, either as a printed paperback book or a downloadable PDF file. This publication is intended to serve as a readily accessible technical resource for manufacturers and regulatory officials, to advance global awareness and implementation of the OIE’s established science-based standards for the quality, safety, and efficacy of veterinary vaccines.

9.4. **Update on the ad hoc Group on QMS\(^{18}\) implementation tools**

Ms Jennifer Lasley from the OIE Programmes Department presented an update on the planning to date for the upcoming ad hoc Group on QMS’ implementation tools. In the framework of the Laboratory Focal Point seminars, Member Countries have stated that more technical assistance from the OIE in the implementation of the OIE Standards is needed, especially for those Member Countries for which laboratory accreditation is not a mid- or long-term goal. The need of Member Countries remains, although the ad hoc Group was cancelled for unforeseen circumstances last September. The Commission recommended that the ad hoc Group be rescheduled and stated that such a tool for QMS implementation will allow all OIE Member Countries to better understand what is expected as a result of the OIE Standards and to work continually towards quality management in their everyday work.

9.5. **Report of the 12th Annual Meeting of the OIE/FAO FMD\(^{19}\) Reference Laboratories Network, Onderstepoort Veterinary Institute, South Africa, 28–30 November 2017**

The Commission noted with interest the report of the 12th Annual Meeting of the OIE/FAO FMD Reference Laboratories Network.

9.6. **Laboratory Focal Point seminars: review of activities in 2017 and plans for 2018**

Ms Lasley presented outcomes from the first seminar of the second cycle of the regional seminars of the National Focal Point Programme for Veterinary Laboratories which occurred in Slovenia 27–29 June 2017. The seminar was composed of four main topics – transport of specimens, biological risk analysis, quality management, and systems-based approach to laboratory networking – and the theme of the seminar was “Towards a culture of safety and quality”. Members of the Commission will be requested to attend the future regional seminars planned in 2018, in Africa in September 2018 and tentatively in Middle East in November 2018.

9.7. **Update of the OIE’s work on VPPs\(^{20}\)**

Ms Lasley provided a brief update of the OIE’s work on VPPs. She informed the Commission that pursuant to the plan to develop recommendations for core competencies and guidelines of curricular requirements, the ad hoc Group’s Special Session on Curricula Development met in November 2017 and developed a working draft of core curricula, and the ad hoc Group met in February 2018 to finalise the draft competencies presented to Members. It covered three tracks identified as important for VPPs working in the Veterinary Services: animal health field work, veterinary public health field work and laboratory diagnosis. The finalised document will be published and shared with the General Assembly in May 2018. The next meeting of the ad hoc Group’s Special Session on Curricula Development will be convened from 3 to 6 April 2018 and will focus on the finalisation of the core curricula for the piloting phase.

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\(^{18}\) QMS: Quality management systems

\(^{19}\) FMD: Foot and mouth disease

\(^{20}\) VPPs: Veterinary para-professionals

An update on rinderpest post-eradication activities since the last meeting was provided. The first Regional Rinderpest Tabletop Exercise took place in Nairobi, Kenya, from 21 to 23 November 2017 and targeted African countries. It was organised by FAO in cooperation with AU-IBAR and the OIE to test the operability of the Global Rinderpest Action Plan (GRAP), including the Operational Framework for the Rinderpest Vaccine Reserve and gather inputs for its improvement. A second Regional Rinderpest Tabletop Exercise will take place in Colombo, Sri Lanka, from 13 to 16 March 2018, and will target Asian countries. The output of the Technical Expert Meeting on Criteria for Rinderpest Vaccine Manufacturers, which was held at the OIE Headquarters from 18 to 19 December 2017, was presented to the Commission for their information and comment. It was recommended that the criteria were not as stringent as to cause impediments in case of an emergency caused by an outbreak of rinderpest and that the meaning of “approved Vero cell lines” was made clear. The Commission was updated on the outcomes of the 12th meeting of the JAC, which was held from 19 to 20 December 2017 at the OIE Headquarters, in Paris. The JAC discussed pending applications for Rinderpest Holding Facilities – an onsite inspection is expected to take place in March 2018 for a possible Category A and B facility, while an update on the implementation of actions required for designation of another facility is expected. Also discussed were the implications arising from the publication of genetic sequences of rinderpest virus as well as recommendations for the implementation of the GRAP and accompanying Operational Framework for the Rinderpest Vaccine Reserve.

9.9. Update on the meeting of the OIE Working Group on Wildlife, 12–15 December 2017

Dr François Diaz informed the Commission that the Working Group on Wildlife would undertake, by its next meeting, to search for on-line sources of reliable information on diagnostic methods that can be applied to specimens from wild animals for each of the non-listed pathogens for which information is requested annually from Member Countries on a voluntary basis by the OIE.

9.10. Report of the meeting of the ad hoc Group on Biological Threat Reduction

The Commission was informed about the work of the OIE ad hoc Group on Biological Threat Reduction in relation to Specific Methodologies for Veterinary Services, pertaining to the Investigation of Suspicious Biological Events. The Group was established, following a recommendation of the 1st OIE Global Conference on Biological Threat Reduction in 2015, to develop guidelines for the identification of biological events that are of confirmed deliberate origin or are suspected to be of deliberate origin along with the issues related to the investigation of such events, as they are not yet specifically addressed in OIE Standards or guidelines. The first meeting of the ad hoc group was convened 4–6 July 2017; the second and final meeting was convened 28–30 November 2017. The draft guidelines are currently under final review and will be available on the OIE website in March 2018. As a continuation of the work on the guidelines an international workshop on ‘Bridging Epidemiology and Forensics’ will be held in Paris, 13–15 March 2018.

9.11. WHO Consultative Meeting on the Safe Shipping of Infectious Substances, 15–16 March 2018

The Commission was informed that a Consultative Meeting on Safe Shipping of Infectious Substances would be held at WHO Headquarters in Geneva, Switzerland, from 15 to 16 March. The OIE would be represented at this meeting.


The next Symposium of the WAVLD would be held in Chiang Mai, Thailand from 19 to 22 June 2019. As usual, a 1-day OIE Seminar would be held during the Symposium. At its next meeting in September, the Commission would discuss the theme, programme and speakers.

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21 WAVLD: World Association of Veterinary Laboratory Diagnosticians
10. Any Other Business

10.1. Workplan
The updated work plan was agreed and can be found at Annex 6.

10.2. Dates of the next Biological Standards Commission meeting
The Commission noted the dates for its next meeting: 3–6 September 2018.

11. Adoption of the Report
The report was adopted by the Commission.

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.../Annexes
MEETING OF THE OIE BIOLOGICAL STANDARDS COMMISSION

Paris, 6–9 February 2018

Annex 1

Agenda

1. Adoption of Agenda

   2.1. Update from September meeting: question regarding recommended vaccine dose and frequency for vaccination against brucellosis
   2.2. Update from September meeting: review of a validation dossier for a quantitative real-time PCR method for detection of *Taylorella equigenitalis* directly from swabs
   2.3. Review of validation study on a real-time RT-PCR for equine influenza diagnoses in horses
   2.4. As cysticercosis caused by *Taenia solium* is an OIE listed disease, should a specific chapter on *T. solium* be developed for the swine diseases section of the *Terrestrial Manual*?
   2.5. Review of Member Country comments received on draft chapters and their endorsement for circulation for second-round comment and proposal for adoption in May 2018
   2.6. Late Member Country comment on the chapter on foot and mouth disease
   2.7. Inclusion in the relevant disease chapter a standard sentence referring to diagnostic kits that have been adopted and added to the OIE Register
   2.8. Update of Chapter 3.1. Laboratory methodologies for bacterial antimicrobial susceptibility testing: may require an ad hoc Group

3. OIE Reference Centres
   3.1. Annual reports of Reference Centre activities in 2017
      3.1.1. Possibility to upload final reports of proficiency tests
      3.1.2. Inclusion of a comment section at the end of Collaborating Centre reports
   3.2. Applications for OIE Reference Centre status
   3.3. Changes of experts at OIE Reference Centres
   3.4. Review of new and pending applications for laboratory twinning
   3.5. Request from an OIE Reference Laboratory to list its diagnostic component separately on the OIE website
   3.6. Follow-up actions taken by the candidate laboratory in response to the mission report

3.7. Implementing the performance criteria: identification of noncompliant Reference Laboratories

3.8. Further review and finalisation of the procedures for approval and maintenance of Collaborating Centre status

3.9. OIE Collaborating Centre for Laboratory Biorisk Management: review of strategic plan

4. Ad hoc Groups

Update on activities of past ad hoc Groups

4.1. *Ad hoc* Group on Replacement of the International Standard Bovine Tuberculin

Proposed future ad hoc Groups

4.2. *Ad hoc* Group on Veterinary Biobanking

4.3. *Ad hoc* Group on High Throughput Sequencing, Bioinformatics and Computational Genomics (HTS-BCG):
   4.3.1. Definition of business processes, operations and main technical specifications of the OIE platform
   4.3.2. Development of sub-modules for the diseases that have been selected for the pilot phase of the OIE platform project
5. **International Standardisation/Harmonisation**

5.1. OIE Register of diagnostic kits
   5.1.1. Update and review of applications

5.2. Standardisation programme
   5.2.1. Update on progress on developing guidelines for the preparation and validation of International Reference Standards for Polymerase Chain Reaction assays
   5.2.2. Update on project to extend the list of OIE approved reference reagents
   5.2.3. EDQM project to establish a biological reference preparation to allow testing of equine influenza vaccines for compliance with the recommendations of the EI Expert Surveillance Panel on vaccine strains: final report
   5.2.4. Serum products: International Serum Industry Association (ISIA) proposal to develop standard sera and European Serum Products Association proposal to develop international trade standards for animal serum products used in culture media

6. **Resolutions for the General Session**

6.1. Resolutions to be proposed by the Biological Standards Commission for adoption in May 2018

7. **Conferences, Workshops, Meetings**

   *Past Conferences, Workshops, Meetings*
   7.1. Update on Second OIE Global Conference on Biological Threat Reduction, Ottawa, Canada 31 October – 2 November 2017
   7.2. Update on VICH Steering Group meeting, Tokyo

   *Future Conferences, Workshops, Meetings*
   7.3. Consultation on Sustainable Biosafety and Biosecurity in Laboratories, 1–2 March 2018
   7.4. Workshop on Bridging Epidemiology and Forensics, Paris, 13–15 March 2018
   7.5. 2nd OIE Global Conference on Antimicrobial Resistance and the Prudent use of Antimicrobials in Animals, 29–31 October 2018

8. **Liaison with other Commissions**

8.1. Horizontal issues among the Specialist Commissions
   8.1.1. ToRs for an *Ad hoc* Group on MERS-CoV (Middle-East Respiratory Syndrome Coronavirus) to draft a *Terrestrial Manual* chapter
   8.1.2. Report of the meeting of the *ad hoc* Group on avian influenza

8.2. Scientific Commission for Animal Diseases

8.3. Terrestrial Animal Health Standards Commission
   8.3.1. Member Country comments on Chapter 8.3. Infection with bluetongue virus
   8.3.2. Chapter 8.11. Infection with *Mycobacterium tuberculosis* complex (inclusion of tests on camelids and goats)
   8.3.3. Member Country comments on Chapter 8.16. Infection with rinderpest virus (Article 8.16.2.)
   8.3.4. Member Country comments on Chapter 8.X. New chapter on infection with *Trypanosoma evansi* (non-equine surra)
   8.3.5. Member Country comments on Chapter 11.12. Infection with *Theileria annulata, T. orientalis* and *T. parva* (bovidae)
   8.3.6. Member Country comments on Chapter 12.3. Infection with Trypanozoon in equids (dourine, equine surra)
   8.3.7. Member Country comments on Chapter 14.X. New chapter on infection with *Theileria lestoquardi, T. luwshuni* and *T. uilenbergi* (small ruminants)
   8.3.8. Member Country comments on Chapter 12.10 Infection with *Burkholderia mallei* (Glanders)
   8.3.9. Member Country comments on the Glossary
   8.3.10. Member Country comments on Chapter 5.8 International transfer and laboratory containment of animal pathogens

8.4. Aquatic Animal Health Standards Commission
9. Matters of Interest for Consideration or Information
   9.1. Peste des petits Ruminants Global Eradication Programme (PPR-GEP) workshop for thermotolerant PPR vaccines
   9.2. Update on OFFLU
   9.3. Project to prepare French translations of Terrestrial Manual chapters pertaining to vaccines, and to publish an OIE handbook of standards for veterinary vaccines in English, French, and Spanish versions
   9.4. Update on the ad hoc Group on QMS implementation tools
   9.5. Report of the meeting of the FMD network, 28–30 November 2017
   9.6. Laboratory Focal Point seminars: review of activities in 2017 and plans for 2018
   9.7. Update of the OIE’s work on VPPs
   9.9. Update on the meeting of the OIE Working Group on Wildlife, 12–15 December 2017
   9.10. Report of the meeting of the ad hoc Group on Biological Threat Reduction
   9.11. WHO Consultative Meeting on the Safe Shipping of Infectious Substances, 15–16 March 2018

10. Any Other Business
   10.1. Workplan
   10.2. Dates of the next Biological Standards Commission meeting: 3–6 September 2018

______________
MEETING OF THE OIE BIOLOGICAL STANDARDS COMMISSION
Paris, 6–9 February 2018

List of participants

<table>
<thead>
<tr>
<th>MEMBERS</th>
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</tr>
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Biological Standards Commission/February 2018 25
# Comments on draft chapters for the OIE *Terrestrial Manual*: traceability sheet

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<th>Chapter</th>
<th>Biological Standards Commission’s decision</th>
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<td>Aujeszky’s disease (infection with Aujeszky’s disease virus)</td>
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<td>7. 2.1.16.</td>
<td>Q fever (vaccine section)</td>
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<td>8. 2.1.17.</td>
<td>Rabies (infection with rabies virus)</td>
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</table>
## Comments on draft chapters for the OIE Terrestrial Manual: traceability sheet

<table>
<thead>
<tr>
<th>Chapter</th>
<th>Biological Standards Commission's decision</th>
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<tbody>
<tr>
<td>9. 2.1.19.</td>
<td>Rinderpest (infection with rinderpest virus) As the C-ELISA can have cross reactions with peste des petits ruminants virus, the Commission agreed to amend the rankings in Table 1 from &quot;+++&quot; to &quot;++&quot;; as the VN has high specificity, the rankings were amended from &quot;++&quot; to &quot;+++&quot;. Given that the Terrestrial Code requires targeted surveillance involving serological, as well as clinical and virological, testing for proof of freedom following an outbreak, and that it is still available at one of the OIE Reference Laboratories for rinderpest, the Commission agreed to reinstate the C-ELISA. A Member Country asked if there are any data available about the characteristics of reversion to virulence of LA-AKO strain. The OIE Reference Laboratory in Japan can provide references on request (in Japanese with English abstracts). To move towards the eventual removal of a requirement for animal inoculation for vaccine safety testing, text was added recommending that candidate vaccine virus be sequenced and compared with reference strains.</td>
</tr>
<tr>
<td>10. 2.1.24.</td>
<td>West Nile fever The Commission did not agree to replace details on how to undertake a real-time RT-PCR with text requesting that the reader follow the instructions provided by a kit manufacturer because not all Member Countries use or have access to kits.</td>
</tr>
<tr>
<td>11. 2.2.5.</td>
<td>Infestation with Aethina tumida (small hive beetle) The Commission accepted some proposed wording changes in the description of the disease.</td>
</tr>
<tr>
<td>12. 2.2.6.</td>
<td>Infestation of honey bees with Tropilaelaps spp. Only minor editorial comments received. The Commission accepted them all.</td>
</tr>
<tr>
<td>13. 2.3.1.</td>
<td>Avian chlamydiosis Only one minor editorial comment received. The Commission accepted it.</td>
</tr>
<tr>
<td>14. 2.3.2.</td>
<td>Avian infectious bronchitis Only minor editorial comments received. The Commission accepted them.</td>
</tr>
<tr>
<td>15. 2.3.7.</td>
<td>Duck virus enteritis The Commission agreed to include a real-time PCR protocol.</td>
</tr>
<tr>
<td>16. 2.3.11.</td>
<td>Fowl typhoid and Pullorum disease Only minor editorial comments received. The Commission accepted them.</td>
</tr>
<tr>
<td>17. 2.4.10.</td>
<td>Enzootic bovine leukosis Only one minor editorial comment received. The Commission accepted it.</td>
</tr>
<tr>
<td>18. 2.4.14.</td>
<td>Malignant catarrhal fever Only minor editorial comments received. The Commission accepted them all, including disease description in the summary.</td>
</tr>
<tr>
<td>19. 2.4.15.</td>
<td>Theileriosis Only minor editorial comments received. The Commission accepted them.</td>
</tr>
<tr>
<td>20. 2.4.16.</td>
<td>Trichomonosis Minor typos only: Commission accepted them.</td>
</tr>
<tr>
<td>21. 2.4.17.</td>
<td>Animal trypanosomoses (including Tsetse-transmitted, but excluding surra and dourine) Only minor editorial comments received. The Commission accepted them.</td>
</tr>
<tr>
<td>22. 2.5.2.</td>
<td>Contagious equine metritis Minor comments accepted. The Commission reviewed the rating of tests in Table 1 in consultation with the experts and agreed that the PCR shows potential but has not yet been fully validated to +++ level so left the ++ rating.</td>
</tr>
<tr>
<td>Chapter</td>
<td>Biological Standards Commission’s decision</td>
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<tr>
<td>23. 2.5.4.</td>
<td>Epizootic lymphangitis</td>
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<td>24. 2.5.11.</td>
<td>Glanders and Melioidosis</td>
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<td>25. 2.7.4.</td>
<td>Contagious agalactia</td>
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<td>26. 2.7.6.</td>
<td>Enzootic abortion of ewes (Ovine chlamydiostis)</td>
</tr>
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<td>27. 2.8.2.</td>
<td>Atrophic rhinitis of swine</td>
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<td>28. 2.8.8.</td>
<td>Swine vesicular disease</td>
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<td>29. 3.4.</td>
<td>The role of official bodies in the international regulation of veterinary biologicals</td>
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<tr>
<td>30. 3.7.2.</td>
<td>Minimum requirements for the production and quality control of vaccines</td>
</tr>
</tbody>
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PROCEDURES FOR DESIGNATION OF OIE COLLABORATING CENTRES

1. Scope and background

OIE Collaborating Centres are centres of expertise in a specific designated sphere of competence related to the management of general questions on animal health issues or other topics related to OIE activities (“specialty”). In its designated specialty, they must provide their expertise internationally.

In May 2011, the World Assembly of Delegates of the OIE (hereafter the Assembly) adopted new Terms of References (ToRs) and Internal Rules for OIE Reference Centres. The ToRs for Collaborating Centres had emphasised their role as centres of research, expertise, standardisation and dissemination of techniques within their sphere of competence, proposing or developing procedures that would facilitate harmonisation of regulations applicable to the surveillance and control of animal diseases, coordinating scientific and technical studies and providing scientific and technical training to personnel from OIE Member Countries. From 2011, the ToRs added the obligation that Collaborating Centres 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. Although OIE Collaborating Centres provide their expertise internationally, the new ToRs emphasised the regional focus of their activities.

In 2017, the Biological Standards Commission began to consider ways to better engage the network of OIE Collaborating Centres in the goals of the OIE. As a first step, the Commission identified focus areas for OIE Collaborating Centre activities for future applicants. The aim was to better categorise and standardise topics of interest to the OIE and to improve both clarity and opportunities for networking. The ultimate goal was to have a functioning international network of clearly identified expertise on cross-cutting thematic issues linked to the Sixth OIE Strategic Plan. In consultation with the three other OIE Specialist Commissions, the definite list of six main focus areas, each with a number of specialties, was finalised.

The OIE has developed this document on the Procedures for designation of OIE Collaborating Centres to assist Member Countries, current OIE Collaborating Centres and Contact Points, and applicant institutes to better understand the applicable procedures.

2. Submission of an application

The OIE work programme cycle runs from May to May, of which the General Sessions of the Assembly are the start and end points. For OIE Collaborating Centre applications, there are two OIE Specialist Commissions that oversee the designation process: Biological Standards Commission and Aquatic Animal Health Standards Commission for topics relating to terrestrial and aquatic animals, respectively. Depending on the proposed focus area or specialty, these Commissions could solicit one or both of the other Specialist Commissions: Scientific Commission for Animal Diseases, and Terrestrial Animal Health Standards Commission, for an opinion. If the scope of an OIE Collaborating Centre covers both aquatic and terrestrial animal diseases, a lead Commission will be identified and the other relevant Commission (Biologicals or Aquatics) will be consulted.

OIE Specialist Commission meetings are held twice in a cycle, with the first meeting usually held in September and the second meeting in February; these dates can vary slightly each cycle based on the availability of the members of the relevant Commissions. Applications, which must be on topics identified in the focus areas and specialties, should be submitted 45 days before the date scheduled for the Specialist Commission meeting. The 45-day period gives the OIE sufficient time to screen, translate into English when necessary, and process the dossiers for the Commission’s evaluation. Deadlines must be strictly observed to allow a full evaluation of the dossiers by the members of the Commission prior to the meeting. Applications received after the deadline are examined at the next Commission meeting.

The applicant institute should submit the information using the guidelines for applicants for OIE Collaborating Centre status (cf. Appendix 1) published on the OIE website: http://www.oie.int/en/our-scientific-expertise/collaborating-centres/guidelines-for-applicants/. Applications must be limited to no more than 20 pages in A4 format, single-spaced using Times New Roman font size 10pt. Relevant appendices may be attached with clear
cross-referencing to the core document to provide further details, but it must be borne in mind that all the necessary information should be summarised in the main document. All documents must be prepared in one of the official languages of the OIE (English, French or Spanish).

While evaluating a submitted dossier, the Commission may have questions for the applicant institute. These questions will be sent by letter signed by the Director General of the OIE after the Commission meeting. The applicant institute should provide written answers by an appointed deadline or by the deadline prior to the next meeting of the Commission (45 days before the date scheduled for the next meeting of the relevant Commission).

According to the Internal Rules, Collaborating Centres are limited to one per topic per region. Multiple institutions interested in designation for the same topic in the same region could apply as a consortium or seek to form a consortium with an already designated Centre. Proposals to form consortia will be evaluated by the Biological Standards or Aquatic Animal Health Standards Commission, the Council, the Regional Commission and finally adopted by the Assembly.

3. Preliminary screening of application

On submission of the dossier, the OIE Headquarters (Science and New Technologies Department) acknowledges its receipt and confirms the meeting dates of the relevant Specialist Commission. If a gap in the information provided is identified, the OIE Headquarters may request the submission of an amended application or additional information before a set deadline.

4. Evaluation by the relevant OIE Specialist Commissions

As stated above, the Biological Standards Commission and the Aquatics Animal Health Standards Commission conduct evaluations of OIE Collaborating Centre applications for terrestrial and aquatic animal diseases, respectively, but could solicit the opinion of the one or both of the other Specialist Commissions: Scientific Commission for Animal Diseases, and Terrestrial Animal Health Standards Commission.

The Terms of Reference, Internal Rules, Qualification and election procedures for members of OIE Specialist Commissions are found in the OIE Basic Texts. The members of the Commissions are elected or re-elected every 3 years by the Assembly. Commission members are requested to comply with the OIE requirements and procedures regarding confidentiality and the management of conflicts of interest. The President of the Commission and the OIE Secretariat ensure that any members with conflicting interests in relation to a particular dossier do not take part in the discussions and final decision-making.

The OIE Basic Texts also provide the Terms of Reference, designation criteria, and internal rules for OIE Collaborating Centres. All OIE Collaborating Centres applications are assessed by the appropriate OIE Specialist Commission using standardised criteria that include: the institution’s ability, capacity and readiness to provide services; the scientific and technical standing of the institution concerned at the national and international levels; the quality of its scientific and technical leadership including internationally recognised expertise; the institution’s prospective stability in terms of personnel, activity and funding; and the technical and geographical relevance of the institution and its activities to OIE’s programme priorities.

When conducting an evaluation of an applicant OIE Collaborating Centre, the Commission may also take into account any other information available in the public domain that is considered as pertinent to the evaluation of the dossier.

In accordance with the Basic Texts of the OIE, all formal correspondence between the Commission and outside individuals or bodies shall be issued through the office of the Director General of the OIE. All correspondence between an applicant institute and the OIE Headquarters is duly documented by the OIE Headquarters.

5. Evaluation by the relevant OIE Regional Commissions

In light of the regional focus of the activities of OIE Collaborating Centres, and of Article 3 of the Internal Rules (for OIE Reference Centres), which states that “no more than one Collaborating Centre shall be designated for the same category of specialty in the same region or, exceptionally, in a sub-region”, all applications must also be reviewed and endorsed by the relevant OIE Regional Commission.
6. Endorsement by the OIE Council

In accordance with Article 3 of Chapter 4 on the Internal Rules, and relevant Resolutions previously adopted, all OIE Collaborating Centre applications are endorsed by the OIE Council before presented to the Assembly for approval.

7. Communication on the outcome of the evaluation with the applicant Collaborating Centre

After their meeting, the relevant Specialist Commission produces a report that includes the outcomes of the evaluation of Collaborating Centre applications. For successful applicants, the title and address of the applicant institute and the Contact Point are published in the report along with the recommendation that they be accepted by the Assembly for adoption by resolution. Unsuccessful applicants are informed by letter from the Director General of the OIE. This letter is not released in the public domain and the identity of the institution is not revealed in the Commission report. In some cases the Specialist Commission may have questions or require additional information before a final decision can be taken. This information should be submitted to the OIE by the appointed deadline for consideration by the Commission at its next meeting.

8. Adoption of OIE Collaborating Centres by the Assembly

The Assembly, on the basis of the assessment by the relevant OIE Specialist Commission, Regional Commission and the endorsement by the OIE Council, adopts by Resolution all new OIE Collaborating Centres. Official designation as an OIE Collaborating Centre comes into force only after adoption of Resolution of the Assembly.

Shortly after the General Session, the newly designated OIE Collaborating Centre will receive a letter from the OIE Director General. The OIE Headquarters also updates the list of OIE Collaborating Centre on its website.

Figure 1. Timeline for applications for OIE Collaborating Centres.

*Presented to the appropriate Regional Commission at the meeting during the General Session or at a regular Regional Conference depending on the meeting schedule.

9. Change of the OIE Contact Point

Each OIE Collaborating Centre has a Contact Point to supervise the Centre’s activities and act as the liaison between the OIE Headquarters and OIE Member Countries. The Contact Point is often the Director of the institute that hosts the Centre. For changes of Contact Point, the institution should inform the OIE Delegate of the Member Country concerned along with the OIE Headquarters. The relevant OIE Specialist Commissions is also informed of the change and the OIE database is updated.

10. De-listing of OIE Collaborating Centres

Upon the screening and analysis performed by the OIE Headquarters, the relevant Commission reviews the reports and activities of the Collaborating Centres. Where there is insufficient evidence of OIE mandate-related activities, as described in the application, the Commission may recommend to the Council and to the Assembly the withdrawal of the Collaborating Centre designation.
In accordance with Article 9 of the Internal Rules, a Collaborating Centre may revoke the designation at any time. If an OIE Collaborating Centre decides to withdraw its designation as such, an official letter should be submitted to the OIE through the Delegate of the country.

Moreover, in accordance with Article 9 of the Internal Rules, the designation of a Collaborating Centre shall be withdrawn if the Collaborating Centre fails to comply with the provisions of the ToRs and the present Rules. In such cases, the Director General of the OIE, after consulting the appropriate OIE Specialist Commission and OIE Council and notifying the Delegate of the country, proposes the withdrawal to the Assembly.

According to the February 2018 meeting report of the Commissions, five critical points for consideration when evaluating a Centre’s performance were identified:

i) the lack of submission of an annual report;
ii) no response to or progress on specific collaboration projects;
iii) a pattern revealing lack of activity;
iv) no response to requests from the OIE Headquarters for scientific expertise (e.g. inquiry of technical advice from OIE Member Countries, revision of OIE Standards, etc.).
v) noncompliance with administrative obligations relating to transparency and confidentiality (e.g. not renewing the potential conflict of interests declaration or providing a confidentiality undertaking [(cf. Appendices 2 and 3)].

10.1. Renewal of designation at the end of the 5-year term

At the end of the 5-year period, a letter will be sent from the Director General of the OIE requesting a summary of the achievements of the past 5 years and a proposal for the activities for the forthcoming 5 years.

The Biological Standards Commission or the Aquatic Animal Health Standards Commission may consider proposing delisting of a Collaborating Centre if the need for the specific topic activities is no longer required. Such proposals would be submitted to the Council and the Regional Commission and must finally be adopted by Resolution of the Assembly.

11. OIE Collaborating Centre Annual report

In accordance with Article 8 of the Internal Rules, the Reference Centre shall provide to the Director General a brief report of activities related to their ToRs at the end of each calendar year, according to the template established by the OIE Headquarters. A letter from the Director General of the OIE is sent to all designated experts of OIE Collaborating Centres for submission of the annual report.

Since December 2014, an on-line system for submitting annual reports for OIE Collaborating Centres has been in place.

The template of the annual report is structured around each ToR for OIE Collaborating Centres as adopted in May 2011. Questions are close-ended (yes/no answers) to generate more accurate and comparable information from the Centres. Tables to allow for the collection of detailed information related to the activities carried out by the Centre are also included. The on-line annual reporting system can be accessed via a dedicated link and a randomly generated username and password that are sent to all Contact Points for the OIE Collaborating Centres in a letter signed by the Director General of the OIE during the last month of the reporting year. The deadline to submit the annual report of the OIE Collaborating Centre activities of each calendar year is usually by mid-January of the following year.

11.1. Review and analysis of the annual reports

The submitted annual reports are first screened and quantitatively analysed, based on the close-ended (yes/no) answers, by the OIE Headquarters. An overview of the analysis is presented to the relevant Commission at its February/March meeting.
OIE Collaborating Centres are expected to fulfil the ToRs adopted by the OIE World Assembly of Delegates as reflected in the annual report.

Any questions or concerns that may arise during the review of annual reports by the Commission can be referred to the concerned OIE Collaborating Centre through the office of the Director General of the OIE.

All annual reports of OIE Collaborating Centre are made available to all Member Countries on the OIE website (http://www.oie.int/en/our-scientific-expertise/collaborating-centres/annual-reports/) after the February meeting of the Commissions.

11.2. Lack of submission of the annual report

After the meeting of the relevant Commissions, Collaborating Centres that have not submitted their annual reports will be sent a letter of reminder, with the Delegate of the host Member Country in copy, to submit the report by an extended and prescribed deadline. For Centres that have still not submitted an annual report by the end of March, a reminder will be addressed directly to the Delegate, with the Contact Point in copy, giving a 2-week deadline to reply to the OIE with an explanation of the situation or circumstances that may have prevented the Collaborating Centre from fulfilling this ToR.

Further communication by letter or direct communication during the General Session may be considered, if needed, prior to the final recommendation to de-list the Centre, which would be taken by the Commission at the September meeting. This procedure could also be applied to Centres failing to meet one of the four other de-listing criteria (cf. Section 10).

________________________

…/Appendices
Appendix 1.

GUIDELINES FOR APPLICANTS FOR OIE COLLABORATING CENTRE STATUS

Applications shall be submitted in accordance with Article 1 of the Internal Rules and should include the following information:

1. Name and address of applicant institution(s) (telephone and fax numbers, e-mail address, Web site).

2. Name of Director(s) of the institution(s).

3. Name of proposed Head of the Collaborating Centre.

4. The main focus area and specific speciality for which the applicant wishes to be considered (see attached list).

5. Description of how the proposed Centre’s specific speciality will support the OIE and its Member Countries over the 5-year designation period in line with the OIE Strategic Plan. This description should include specific activities and collaboration with the OIE and other centres of expertise, where relevant.

6. Summary of recent activities within the specialty as an international centre of research, scientific expertise, standardisation of techniques and dissemination of knowledge relevant to the proposed Collaborating Centre.

7. Summary of recent activities on the development of methods and procedures that will facilitate harmonisation of international standards and guidelines relevant to the proposed Collaborating Centre applicable to the designated speciality.

8. Recent provision of expert consultancy, or scientific and technical training for the OIE or OIE Member Countries other than the one in which the proposed Centre is located.

9. Recent international scientific meetings organised by the proposed Collaborating Centre.

10. List of current activities relevant to the proposed Collaborating Centre the mandate and speciality of the Centre carried out in collaboration with other centres, laboratories or organisations.

11. List of recent publications of international significance relevant to the proposed Collaborating Centre within the proposed speciality.

12. Information on professional experience and relevant expertise of the proposed Head of the Collaborating Centre and the scientists who will work within the proposed Collaborating Centre demonstrating their competence relevant to the proposed Collaborating Centre in the speciality.

13. Where the proposed Centre involves more than one institution or research group, robust governance arrangements should be documented, to ensure clear lines of communication and accountability. Direct OIE Member involvement in governance arrangements, with appropriate financial support, is recommended.

14. A description or an organisational chart of the proposed Collaborating Centre and the institution(s) hosting it.

15. Relevant legal and budgetary provisions in place that provide assurance on the sustainability and functioning of the centre.

The term for an OIE Collaborating Centre will be 5 years after which the designation will be reviewed by the relevant OIE Specialist Commission.

The application will be processed by OIE in accordance with Articles 2, 3 and 4 of the Internal Rules.
World Organisation for Animal Health (OIE)
Confidentiality Undertaking

For OIE Reference Centres
<Name of the Designated OIE Reference Centre>

On behalf of the above institution, the undersigned accepts and agrees to respect the legitimate confidentiality of such information as may be obtained from the OIE or on behalf the OIE in the framework of its activities as OIE Reference Centre as defined by the applicable terms of reference, the disclosure of which would undermine the interests of the OIE or of its Member Countries or the privacy and the integrity of individuals associated with the OIE. This Undertaking is valid for the institution and its staff.

In particular, the undersigned accepts to respect the legitimate confidentiality of information the disclosure of which would undermine the protection of commercial interests of a natural or legal person, including intellectual property, legal proceedings and advice, and the purpose of inspections, investigations and audits. That commitment is made in compliance with the mandate and obligations adopted by the Assembly.

The undersigned accepts that there is a life-long duty of confidentiality in regard to the protection of legitimate confidentiality as described above, and that this obligation does not cease after the termination of a working or other relationship with the OIE, except in the case that the information legally enters the public domain or is disclosed by the Director General when there is an overriding public interest in such a disclosure.

Date: _________  Signature_______________________________

Name:

Institution:

Address:

Telephone:

Email:
Notes:

All Members of Specialist Commissions, members of OIE Working Groups and ad hoc Groups, OIE Experts and specialists participating at the invitation of the Director General in meetings and in expert missions are required to complete an Undertaking to protect legitimate confidentiality. Heads of institutions that are OIE Reference Centres are required to complete a similar Undertaking covering the institution and its staff.

At the specific level dealing with intellectual property, the Standard Operating Procedures for OIE Validation and Certification of Diagnostic Assays will continue to be used and will be adapted to other situations requiring the protection of intellectual property as appropriate. The completion of a generic undertaking to respect legitimate confidentiality does not annul the requirement to complete a specific undertaking in regard to the protection of intellectual property.

Failure to complete an Undertaking in respect of legitimate confidentiality may result in the person concerned no longer being considered as an OIE Expert or as a member of a Working Group or ad hoc Group, or revocation of designation in the case of an OIE Reference Centre; alternatively, it may be decided to restrict the access of the person or institution concerned to any information available from the OIE. Such decisions shall be managed by the Director General in consultation as appropriate with the Delegate of the Member Country concerned, the executive head of the International Organisation with which the expert is associated, or the Council of the OIE. In the case of a Member of a Specialist Commission the Director General will consult the President of the Specialist Commission concerned (or one or both of its Vice Presidents if the matter concerns the President) the President of the Assembly and the Delegate on the action to be taken.

Any dispute relating to the interpretation or application of this Undertaking shall, unless amicably settled, be subject, at the request of either party, to one conciliator. Should the parties fail to reach agreement on the name of a sole conciliator, each party shall appoint one conciliator. The conciliation shall be carried out in accordance with the Conciliation Rules of the United Nations Commission on International Trade Law, as at present in force. In the event of failure of the latter, the dispute shall be settled by arbitration. The arbitration shall be conducted in accordance with the Arbitration Rules of the United Nations Commission on International Trade Law as at present in force. The parties shall accept the arbitral award as final.
DECLARATION OF INTEREST FOR OIE REFERENCE CENTRES

To be completed by the Head of the Reference Centre on behalf of the Centre itself and for Staff of the Institution involved in matters related to the work of the OIE

Annual Declaration of Interests with Commercial Entities

Part A: Institution

<table>
<thead>
<tr>
<th>Type of interest, and basic descriptive details.</th>
<th>Name of the commercial entity</th>
<th>Amount of income or value of interest</th>
<th>Current interest (or year ceased)</th>
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Part B: Staff of the Institution working on OIE matters

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<th>Type of interest, and basic descriptive details.</th>
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Date: __________  Signature________________________________

Name:

Institution:

Address:

Telephone:

Email:

Note:

Part B of the above report is required only for Staff of the Reference Centre whose work relates to the work of the OIE in the capacity of the Institution as a designated OIE Reference Centre.
International Reference Standards for Polymerase Chain Reaction assays

1. Introduction

1.1. Purpose

This document provides guidelines for the preparation, validation and distribution of controls of molecular assays as International Reference Standards for polymerase chain reaction (PCR) assays applied for the diagnosis of infectious diseases of animals. Diagnosis by PCR has become the state of art for most of the infectious diseases of animals relevant to OIE. While PCR techniques, and in particular real-time PCR, provide excellent performance characteristics in terms of sensitivity and specificity, proper control is pivotal. In these guidelines, the term “Standards” refers to nucleic acids unless indicated otherwise. Such standard preparations are designated by the OIE as primary reference standards for use in conjunction with tests described in the OIE Manual of Diagnostic Tests and Vaccines for Terrestrial Animals (Terrestrial Manual).

1.2. Definitions

1.2.1. Standard

A Standard is defined as a substance (nucleic acid in this case) that has been shown by an extensive set of analytical tests to be an authentic material of high purity, from a recognised source, carefully prepared, scientifically confirmed, obtained from clinical materials or artificially synthesised and of known status.

1.2.2. Standard Test Protocol

Standard Test Protocol refers to a validated, internationally accepted test procedure, as referenced in the OIE Terrestrial Manual.

1.2.3. International Reference Standard

The term International Reference Standard is synonymous with primary reference standard. It represents the standard against which all others are compared and calibrated.

1.2.4. Secondary Reference Standards

Secondary standards are prepared by direct comparison with the International Reference Standard, and should mimic the characteristics of the primary standard when used in the Standard Test Protocol. A Secondary Standard would typically be prepared by a national reference laboratory to be distributed and used by the designated national or local laboratories. In that case, the Secondary Standard would be designated as the National or Local Standard.

1.2.5. Working or in-house Standards

Working or in-house standards may be synonymous with Secondary Standards, or they may be Tertiary Standards calibrated against the Secondary Standard. Working Standards are defined as an appropriately characterised material prepared from a Primary Reference Standard lot to support routine testing of lots for quality control purposes in biological assays of PCR. It is always calibrated against the Primary reference standard or the official reference standard and should be available in sufficient quantities for use by diagnostic laboratories to standardise routine daily testing.
1.3. Scope

Reference standards play a critical role in calibrating and confirming validity of test as well as quality control of the conclusions obtained from the data analysed, and are key elements to ensure continuity of the test, quality of results, stability of the reagents and comparability between experiments. Establishing and using reference standards are essential in quality controlled testing to ensure the accuracy of results and to monitor assay performance.

International Reference Standards are normally for use by international, national and other reference laboratories in calibrating standard assays and as templates for the production of secondary standards, while the secondary or other working standard, and not the international standard, are to be used on a daily basis to standardise testing. International Reference Standards are necessary to ensure that a given PCR assay is capable of measuring presence of target nucleic acid to a specified level of diagnostic sensitivity. Diagnostic sensitivity relates to the risk of a false negative reaction occurring in a PCR assay when in fact an animal is, or has been, infected.

They are so important that appropriate protocols for manufacture and qualification of reference standards should be in place to ensure that they are well characterised, qualified and stable. The Reference Standards should be selected and characterised by a designated Reference Laboratory using an internationally accepted Standard Operating Procedure (SOP) and internationally accepted reagents. For most assays, three primary Reference Standards should be established:

- A strong positive with a target copy number in at least 10,000 fold excess of the limit of detection (LOD) of the specific PCR assay (see Chapter 3.6.3 Development and optimisation of nucleic acid detection assays of the OIE Terrestrial Manual),

- A weak positive with a target copy number in excess of at least 50-fold the LOD, which can be generated by defined dilution of the strong positive control. The weak positive standard is critical for providing assurance of the diagnostic sensitivity of the test.

- For semi-quantitative approaches (e.g. real-time reverse transcriptase PCR [RT-PCR]) the strong positive standard could be used to produce a series of dilutions with known copy numbers of the target sequence, which could be used as a calibration curve. For non-quantitative and quantitative assays (e.g. conventional RT-PCR), the weak positive reference standard may be the only positive standard required.

- A negative standard containing a high copy number of an irrelevant target.

1.4. Approach

The approach to creating and using standards are often unique to the type of standard material. Approaches other than the one presented here can also be acceptable, this document is not binding regulatory it is just a guidance to illustrate how to qualify new standards and the challenges to maintain them. OIE Reference Laboratories producing an International Standard should liaise with other OIE Reference Laboratories especially those designated for the same disease with the aim of organising an inter-laboratory system to improve the consistency of results across participant laboratories. Performing a proficiency test would give an added value to the International Standard, would ensure harmonisation across laboratories, and would promote networking and cooperation among the OIE Reference Centres.

Some general guidelines to address the specifications for good standards are:

- Define a well thought qualification programme that includes a correct characterisation strategy;
- Minimise the number of reference standards in circulation;
- Provide assurance that they are permanently available;
- Maximise their implementation making them easily accessible to all groups that need them;
- Collect and compare scientific data to guarantee consistency, conformance, and accuracy;
- Compile and procure historical data for shelf live, preservation, and extinction of the standards;
- Consider instances when a new reference standard must be qualified and assigned;
2. Selection of Material for use as Standards

2.1. Considerations for selecting standard materials

Selecting the type of material to be used as standard is probably the most critical step during their preparation. Some nucleic PCR assays utilise diagnostic material obtained directly from a suspect case, whereas the same or other assays may be applied following preliminary in-vivo or in-vitro cultivation/multiplication of the infectious agent(s).

However, several aspects should be considered when preparing Primary Reference Standards.

2.1.1. Material suitability

According to the purpose of the test, the original source for preparing the standard requires a rigorous assessment of the “true” value of a material or at least establish and statistically justify its accurate value.

2.1.2. Material specificity

The standard should be representative of the possible targets for the test, including representation of all known variations and blend of scenarios expected for the process.

2.1.3. Material constituents

Similarity of the original sample to the sample of choice for the assay. The condition of having the same attributes, including impurities, as the clinical material to be tested is of most importance for the preparation of the Primary Reference Standards.

2.1.4. Material abundance

Replacing Primary Reference Standards should be kept to the absolute minimum because it requires extensive testing effort and copious amounts of data to qualify as a replacement for the previous Primary Standard. So it is strongly recommended to consider a source capable to supply standards for an extended period of time to all the possible users.

2.2. Types of material

Depending on the PCR assay either DNA or RNA controls will be required. Due to its fragility distribution of “naked” RNA standards calls for more complex shipment conditions (e.g. dry ice, etc.) than DNA.

Preparation of controls by extraction of nucleic acids directly from an infectious agent provides the highest similarity with most of clinical samples. However, it is discouraged due to risks of residual infectivity, and lack of a standardised copy-based enumeration of targets.

Recombinant plasmid DNA solubilised in a matrix of negative reference standard, or the most appropriate buffer solution, is considered stable for distribution.

Controls for molecular assays involving RT-PCR should be based on RNA as this also enables control of the reverse transcription step. Although not as common as the use of recombinant DNA, it is also possible to obtain RNA for control on RT-PCR through in-vitro transcription of DNA plasmids containing specific promoter sequences.

Encapsidating standard control DNA or RNA into a rigid proteinaceous shell (so-called armouring) increases stability significantly, especially in the case of RNA. Armoured nucleic acid controls have the added advantage over “naked” DNA/RNA controls to enable the analysis of the efficacy of the nucleic acid extraction part of the SOP. However, use of such armoured controls (e.g. recombinant bacterial phages) may be limited due to their potential GMO status.
2.3. Constitution of the Standards

The first step in preparing International Reference Standards is the selection of the negative stock from single source or a pool of samples from animals that have never been exposed or vaccinated against the organism in question. This material should be carefully screened to ensure that there is no evidence of cross-reacting or other nonspecific factors that may interfere with the test, despite demonstrating an admissible range of background activity representative of the majority of negative samples. For International Reference Standards it might be advisable the use of a pool of negative samples in order to minimise particularities of a single specimen.

The second step is the selection of the positive material to prepare both the strong and the weak reference standards. Like in the previous case, because there is a number of factors that may influence the outcome of an infection, or just the response to the phenomenon under study, it is advisable to use a pool representative enough of the diversity of positive cases. If the positive material is obtained from experimental conditions, it should be confirmed that it mimics the natural course of events as close as possible to avoid deviations in calibration of the test and interpretation of the positive results.

2.3.1. Negative Reference Standards

Negative Reference Standard should be derived from a similar sample of pool of samples with typical background activity or, at least comprise nucleic acid prepared in the same way as the positive standard but derived from an irrelevant target sequence. They must be free from potentially inhibitory substances that might mislead the interpretation of the negative result, artificially cross-react or otherwise interfere in the standard assay in a different way than the positive standard material.

2.3.2. Positive Reference Standards

The Positive Reference Standards should be based on a selected reference isolate of the infectious agent to be detected by the molecular assay, either derived from a similar sample or pool of samples, or a recombinant product that typifies the target sequence. The selected isolates must be representative for the group of agents targeted by the specific assay. Preferably the full length nucleotide sequence of the selected isolate should be known but at least the sequence of the target region is required.

Most of the Reference Standards should be prepared from a one-time dilution the negative standard matrix to yield activities that are comparable with the tested field material, the reaction produced should never be equivocal. However, for some specific applications of the PCR, it is advisable that the Positive Reference Standard be free from other nucleic acids that might cross-react or otherwise interfere in the standard assay.

The activity of the Positive Reference Standards should be defined by specific points in the linear portion of the dose–response curve of the target.

2.3.2.1. Strong Positive Reference Standard

The strong positive should represent activity midway between the upper and the central points of the linear portion of the dose–response curve.

2.3.2.2. Weak Positive Reference Standard

The weak positive should represent activity midway between the central and the lower points of the linear portion of the dose–response curve. The weak positive reference standard should produce positive results just above the positive/negative threshold in the standard assay protocol.

2.4. Safety

The reference standards should be prepared so that they are free of infectious material. To facilitate shipment between countries it is recommended that the standards in the wet state be either treated by a method that has been validated as inactivating residual infectivity whilst retaining its reactivity in the assay. Examples include nucleic acid extraction by validated phenol/chloroform methods or by use of methods depending on chaotropic salts and heating. After treatment, samples should be submitted to appropriate innocuity tests as described in Chapter 1.1.9 Tests for sterility and freedom from contamination of biological materials intended for veterinary use of the Terrestrial Manual to ensure that they are free from detectable live agents.
3. Use of International Reference Standards

3.1. Preparation

An International Reference Standard should not require any special manipulation (e.g. pre-dilution) by the recipient laboratory prior to its use in the assay in question. Hence, when possible, the positive reference standards should be prepared from materials showing the desired level of reactivity without further dilution.

However, to prepare Secondary and Working reference standards, it will be necessary for the laboratory to make dilutions from the International Reference Standard material in order to achieve the desired level of reactivity as specified in Sections 2.3.1 and 2.3.2, for either Negative or Positive (strong and weak) Reference Standards, respectively. It would be advantageous to provide the sterile diluent for reconstitution of the material, along with the freeze-dried standard.

Before using the standard as actual controls of the routine tests, the standards should be tested as would any field sample or culture, under routine diagnostic conditions (including any extraction and dilution steps that are a normal part of the assay procedure). This will confirm that the amount of target nucleic acid in the reference standards are specific and sensitive within the accurate detection limits of the diagnostic test.

3.2. Quality control of Standards

Ideally, the original reference material must begin as one single stock with enough to last at least 5 years. This can be kept frozen (preferably at –70°C or below) in aliquots so every batch can last for a minimum of about 500 tests supply.

After production, several units of the standard should be reconstituted and re-evaluated over time. Recalculation of copy-based target numbers is required for quality control of standards for quantitative assays. If there is a possibility of decay of activity over time, this information should be indicated.

For each batch, whether frozen or freeze-dried, batch references must be performed to demonstrate adequacy and “true” value

3.2.1. Batch references

- A complete description of the source, date of preparation, manufacture process, and analytics for characterisation (sensitivity/specificity).
- A plot of the dose–response curve to quantify activity strength.

3.2.2. Batch stability

- Periodical testing of single thawed aliquots of the material during the expected lifespan of the batch should be performed.
- A demonstration of the effects that freeze-drying, lyophilisation, or any other process performed for batch conservation may produce in the biological quality of the standard.
- Data from different conditions used for the standard process, or if a new standard process is using these standards should be collected.
- Data of the natural decay of activity and/or factors that may induce degradation of the material should be gathered.

3.2.3. Data sheets

Every batch of reference standards should be accompanied by an information sheet including potency data, performance characteristics and operational aspects such as:

i) The datasheet should repeat all the identification information specified in the label along with batch number and date of production.

ii) Description of the donor infectious agent for the preparation of the standard, including source, strain, origin, and accession number of its genome sequence in a public database;
iii) A warning that the strong positive standard may be causing cross contamination of samples if not handled appropriately.

iv) Details of the standard production protocol, i.e. plasmid designation and origin, bacterial host, purification methods, RNA run-off transcription (if RNA) etc.;

v) Description of the proteineous shell if armoured DNA/RNA;

vi) Reference tests used to select positive and negative reference standard candidates, e.g. conventional or real-time (RT) PCR;

vii) Sample of titration profiles of target nucleic acid on a copy-based scheme and criteria for selection of appropriate dilutions of defined activity for different assay formats (e.g. conventional versus real-time PCR);

viii) Presence of heterologous nucleic acids, if known, and tests used in detection;

ix) Details of any safety testing carried out on the materials;

x) A statement that the standard is for in vitro use only;

xi) Description of sterilisation methods, including type of irradiation and dose and condition of sample at time of sterilisation (i.e. liquid, frozen, freeze-dried, etc.);

xii) Batch number and date of production;

xiii) Recommended reconstitution (type of reconstituting fluid, and volume), handling and storage conditions;

xiv) Full contact address, fax, email of the Reference Laboratory as a source of further information.

3.3. Storage

All materials should be stored frozen or refrigerated. Freeze-dried stocks should be stored at 4°C, although short periods at ambient temperature (e.g. during shipment) should not be deleterious. Storing the standards in cryotubes at –78°C is the recommended alternative solution. Sealed glass ampoules, rather than rubber caps, are preferred for long-term storage.

Repeated freeze–thaw cycles should be avoided, this is particularly relevant for “naked” RNA standards, so reference standards should always be aliquoted and stored to preserve a homogenous, stable standard over time. Using a working standard for routine tests to limit usage of the primary standard is strongly recommended. If possible, single use aliquots to be used immediately and discarded after use are preferable.

3.4. Labelling and Identification

OIE Reference Laboratories issuing international reference standards for PCR assays should ensure that all aliquots are conveniently identified and accompanied by an appropriate data sheet. It should be made clear to requesting laboratories that international reference standards are intended for use in the calibration of their own assay and for promotion of international harmonisation.

The label should contain the following minimum information: OIE logo; OIE international reference standard for (disease) (test); specify if strong positive, weak positive or negative; the name of the Reference Laboratory; reconstitution method; and storage conditions. In case of standards for quantitative assays: target copy numbers/volume. The space available on the label may prevent the inclusion of all these items; abbreviations may be used and some of the items may need to be put on the data sheet instead of on the label.

In order for a diagnostic laboratory to prepare a secondary reference standard for its own use, it will be necessary for the OIE Reference Laboratory to supply specific data on the selection and/or preparation of the primary reference standards.
4. Approval of Reference Standards by OIE

An International Reference Standard may not be issued under the name of OIE unless it has been endorsed by the OIE Biological Standards Commission acting under authority of the OIE World Assembly.

The full technical and statistical data on the evaluation of the candidate reference standards, together with the full data sheet information as specified above, should be submitted to OIE. The OIE Biological Standards Commission will review the information. If the Biological Standards Commission approves, the reference standard will be added to the list of International Reference Standards available. This list will be supplied to all OIE Members Countries on request, and may also be accessed on the OIE Web site (http: www.oie.int).

5. References


## Work Programme for the OIE Biological Standards Commission

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<td>2) Remind authors of the chapters identified previously for update but not yet received</td>
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<td>1) Finalise list of main focus areas and specialties</td>
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<td>2) Finalise and propose for adoption Procedures for designation of Collaborating Centre status</td>
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<td>3) Implementation of the adopted SOPs:</td>
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<td>a) write to existing Collaborating Centres to explain new developments and ask where they fit</td>
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<td>b) review list of existing Collaborating Centre to identify ones that do not easily fit in main focus areas</td>
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<td>c) apply main focus areas and specialties</td>
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<td>d) in-depth review of annual reports</td>
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