# OIE Reference Laboratory Reports Activities

## *Activities in 2016*

### This report has been submitted : 2017-08-30 16:37:36

| | |
|---|---|
| **Name of disease (or topic) for which you are a designated OIE Reference Laboratory:** | African swine fever |
| **Address of laboratory:** | Ash Road, Pirbright Woking, Surrey, GU24 0NF UNITED KINGDOM |
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| **Name (including Title) of Head of Laboratory (Responsible Official):** | Dr Bryan Charleston The Pirbright Institute |
| **Name (including Title and Position) of OIE Reference Expert:** | Linda Dixon |
| **Which of the following defines your laboratory? Check all that apply:** | Research |

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

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

Yes

| Diagnostic Test | Indicated in OIE Manual (Yes/No) | Total number of test performed last year | |
|---|---|---|---|
| Indirect diagnostic tests | | Nationally | Internationally |
| antibody ELISA | yes | 0 | 0 |
| Direct diagnostic tests | | Nationally | Internationally |
| real time PCR | yes | 11 | 0 |
| antigen ELISA | yes | 0 | 0 |

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

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

No

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

Yes

| Type of reagent available | Related diagnostic test | Produced/ provide | Amount supplied nationally (ml, mg) | Amount supplied internationally (ml, mg) | No. of recipient OIE Member Countries | Region of recipients |
|---|---|---|---|---|---|---|
| RNA extracted from pigs immunised wth attenuated strains of ASFV | sequencing | provided | 16 x 200ul | 0 | 1 | ☐Africa<br>☐Americas<br>☐Asia and Pacific<br>☒Europe<br>☐Middle East |
| sera from pigs immunised with attenuated ASFV | various | provided | 0 | 193 x 0.2ml | 1 | ☐Africa<br>☐Americas<br>☐Asia and Pacific<br>☒Europe<br>☐Middle East |
| fixed tissue blocks from pigs infected with ASFV | various | provided | 0 | 530gr approx | 1 | ☐Africa<br>☐Americas<br>☐Asia and Pacific<br>☒Europe<br>☐Middle East |
| ASFV Georgia MGF strain | various | provided | 0 | 9ml | 1 | ☐Africa<br>☐Americas<br>☐Asia and Pacific<br>☒Europe<br>☐Middle East |
| monoclonal antibody against ASFV p30 protein | various | provided | 0 | 1ml | 1 | ☐Africa<br>☐Americas<br>☐Asia and Pacific<br>☒Europe<br>☐Middle East |
| Portugal OURT88/3 and MALTA control strains | various | provided | 0 | 2ml | 1 | ☐Africa<br>☒Americas<br>☐Asia and Pacific<br>☐Europe<br>☐Middle East |

4. Did your laboratory produce vaccines?

No

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

No

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

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

No

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

No

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

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

No

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

Yes

| Name of the OIE Member Country receiving a technical consultancy | Purpose | How the advice was provided |
|---|---|---|
| CHINESE TAIPEI | Advice on ASFV diagnosis | Visit by Taiwanese scientist for discussion |

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

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

Yes

| Title of the study | Duration | Purpose of the study | Partners (Institutions) | OIE Member Countries involved other than your country |
|---|---|---|---|---|
| Testing of prototype lateral flow devices for detection of ASFV antigen | 3 month | To investigate sensitivity and specificity of prototype LFD | Ingenasa Spain, FLI Germany | GERMANY SPAIN |

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

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

Yes

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

No

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

a) Articles published in peer-reviewed journals: 8
1. Unravelling the armour of a killer: Evasion of host defence's by African swine fever virus. Reis AL, Netherton C, Dixon LK. J Virol. 2016 Dec 28. pii: JVI.02338-16. doi: 10.1128/JVI.02338-16. [Epub ahead of print]

2. Effectiveness and practicality of control strategies for African swine fever: what do we really know? Guinat C, Vergne T, Jurado-Diaz C, Sánchez-Vizcaíno JM, Dixon L, Pfeiffer DU. Vet Rec. 2016 Nov 15. pii: vetrec-2016-103992. doi: 10.1136/vr.103992. [Epub ahead of print]

3. English Pig Farmers' Knowledge and Behaviour towards African Swine Fever Suspicion and Reporting. Guinat C, Wall B, Dixon L, Pfeiffer DU. PLoS One. 2016 Sep 29;11(9):e0161431. doi: 10.1371/journal.pone.0161431.

4. Deletion of African swine fever virus interferon inhibitors from the genome of a virulent isolate reduces virulence in domestic pigs and induces a protective response Reis AL, Abrams CC, Goatley LC, Netherton C, Chapman DG, Sanchez-Cordon P, Dixon LK. Vaccine. 2016 Sep 7;34(39):4698-705. doi: 10.1016/j.vaccine.2016.08.011.

5. Sensitivity of African swine fever virus to type I interferon is linked to genes within multigene families 360 and 505. Golding JP, Goatley L, Goodbourn S, Dixon LK, Taylor G, Netherton CL. Virology. 2016 Jun;493:154-61. doi: 10.1016/j.virol.2016.03.019.

6. Transmission routes of African swine fever virus to domestic pigs: current knowledge and future research directions. Guinat C, Gogin A, Blome S, Keil G, Pollin R, Pfeiffer DU, Dixon L. Vet Rec. 2016 Mar 12;178(11):262-7. doi: 10.1136/vr.103593.

7. Experimental pig-to-pig transmission dynamics for African swine fever virus, Georgia 2007/1 strain. Guinat C, Gubbins S, Vergne T, Gonzales JL, Dixon L, Pfeiffer DU. Epidemiol Infect. 2016 Jan;144(1):25-34. doi: 10.1017/S0950268815000862.

8. Immunization of African Indigenous Pigs with Attenuated Genotype I African Swine Fever Virus OURT88/3 Induces Protection Against Challenge with Virulent Strains of Genotype I. Mulumba-Mfumu LK, Goatley LC, Saegerman C, Takamatsu HH, Dixon LK. Transbound Emerg Dis. 2016 Oct;63(5):e323-7. doi: 10.1111/tbed.12303.

b) International conferences: 4
GARA Meeting France Sep 2016
EPIZONE Meeting Madrid Sep 2016
Pox, Asfar, Irido virus workshop France June
ASFSTOP meeting December Poland

c) National conferences: 1
Microbiology Society Conference UK April

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

## *ToR 7: To provide scientific and technical training for personnel from OIE Member Countries*
## *To recommend the prescribed and alternative tests or vaccines as OIE Standards*

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

Yes

a) Technical visits: 1
b) Seminars: 3
c) Hands-on training courses: 0
d) Internships (>1 month): 0

| Type of technical training provided (a, b, c or d) | Country of origin of the expert(s) provided with training | No. participants from the corresponding country |
|---|---|---|
| a | Taiwan | 1 |
| b | EU countries | multiple |

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

15. Does your laboratory have a Quality Management System certified according to an International Standard?

Yes

| Quality management system adopted | Certificate scan (PDF, JPG, PNG format) |
|---|---|
| UKAS ISO/IEC17025 | scope of accreditation UKAS 2016.pdf |

16. Is your laboratory accredited by an international accreditation body?

Yes

| Test for which your laboratory is accredited | Accreditation body |
|---|---|
| real time PCR | United Kingdom Accreditation Service (UKAS) |
| Antibody ELISA | UKAS |
| Antigen ELISA | UKAS |

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

Yes

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

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

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

No

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

Yes

| Title of event | Date (mm/yy) | Location | Role (speaker, presenting poster, short communications) | Title of the work presented |
|---|---|---|---|---|
| Global Alliance for African swine fever virus research | 09/16 | France | Organiser and speaker | Development of Live Attanuated ASFV vaccines |

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

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

Yes

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

Yes

| Purpose of the proficiency tests: [1] | Role of your Reference Laboratory (organiser/ participant) | No. participants | Participating OIE Ref. Labs/ organising OIE Ref. Lab. |
|---|---|---|---|
| EU Annual PT scheme to test PCR, Ab detection and Ag detection by ELISA | Participant | 45 | Organising reference laboratory - Spain |

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

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

No

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

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

Yes

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

| Purpose for inter-laboratory test comparisons[1] | No. participating laboratories | Region(s) of participating OIE Member Countries |
|---|---|---|
| EU Annual PT scheme to test PCR, Ab detection and Ag detection by ELISA | 45 | ☐Africa<br>☐Americas<br>☐Asia and Pacific<br>☒Europe<br>☐Middle East |

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

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

No

25. Additional comments regarding your report: