## WOAH Reference Laboratory Reports Activities 2022

### Activities in 2022

This report has been submitted: 7 mars 2023 18:34

### Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Marek's disease |
| Address of laboratory: | Ash Road, Pirbright, Woking, Surrey, GU24 0NF UNITED KINGDOM |
| Tel.: | +441483231493 |
| E-mail address: | yongxiu.yao@pirbright.ac.uk |
| Website: | https://www.pirbright.ac.uk/diagnostics-surveillance/mareks-disease-virus-reference-laboratory |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Yongxiu Yao |
| Name (including Title and Position) of WOAH Reference Expert: | Dr. Yongxiu Yao, Head of viral Oncogenesis group |
| Which of the following defines your laboratory? Check all that apply: | Academic institution |

### TOR1: DIAGNOSTIC METHODS

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

   Yes

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in WOAH Manual (Yes/No)</th>
<th>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td>Nationally Internationally</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td>Nationally Internationally</td>
</tr>
<tr>
<td>Real-time PCR for virulent MDV-</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

WOAH Reference Laboratory Reports Activities 2022
TOR2: REFERENCE MATERIAL

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

No

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

Yes

<table>
<thead>
<tr>
<th>TYPE OF REAGENT AVAILABLE</th>
<th>RELATED DIAGNOSTIC TEST</th>
<th>PRODUCED/ PROVIDE</th>
<th>AMOUNT SUPPLIED NATIONALLY (ML, MG)</th>
<th>AMOUNT SUPPLIED INTERNATIONALLY (ML, MG)</th>
<th>NO. OF RECIPIENT WOAH MEMBER COUNTRIES</th>
<th>COUNTRY OF RECIPIENTS</th>
</tr>
</thead>
<tbody>
<tr>
<td>DNA from virulent Marek’s disease virus serotype 1 (vMDV-1, Gallid alphaherpesvirus 2)</td>
<td>Real-time PCR</td>
<td>Produced and provided</td>
<td>0</td>
<td>0.2ml</td>
<td>1</td>
<td>America</td>
</tr>
<tr>
<td>DNA from Marek’s disease virus serotype 2 (MDV-2, Gallid alphaherpesvirus 3)</td>
<td>Real-time PCR</td>
<td>Produced and provided</td>
<td>0</td>
<td>0.2ml</td>
<td>1</td>
<td>America</td>
</tr>
</tbody>
</table>

4. Did your laboratory produce vaccines?

No

5. Did your laboratory supply vaccines to WOAH Members?

No

TOR3: NEW PROCEDURES

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

No

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

No

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

No

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

No

TOR4: DIAGNOSTIC TESTING FACILITIES

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

No

11. Did your laboratory provide expert advice in technical consultancies on the request of a WOAH Member?
Yongxiu Yao - Marek’s disease - undefined

No

**TOR5: COLLABORATIVE SCIENTIFIC AND TECHNICAL STUDIES**

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

No

**TOR6: EPIZOOLOGICAL DATA**

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

No

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

No

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

a) Articles published in peer-reviewed journals:

15


6. Zai X, Shi B, Shao H, Qian K, Ye J, Yao Y, Nair V. Qin A. Recombinant Turkey Herpesvirus expressing H9N2 HA gene from the HVT005/006 site induces better protection than that from the HVT029/031 site. Viruses. 2022, 14(11), 2495; https://doi.org/10.3390/v14112495


b) International conferences:

1
Professor Venugopal Nair and Dr. Sue Baigent presented at International Veterinary Vaccinology Network Sponsored Online Workshop on “MAREK’S DISEASE OF CHICKEN - GLOBAL DISCUSSION ON CONTROL STRATEGIES FOR LOCAL MITIGATION”. Hosted by Tamil Nadu Veterinary and Animal Sciences University, India (16th November 2022).

Title of the talks:
• V Nair: MDV – A Global perspective
• S Baigent: Marek’s disease diagnostics at the Pirbright Institute’s MDV Reference Laboratory

c) National conferences:

1
Dr. Sue Baigent organised “UK Poultry Disease Group meeting” online meeting and answered questions relevant to Marek’s disease in the general discussion, 18th July 2022

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

0

TOR7: SCIENTIFIC AND TECHNICAL TRAINING

17. Did your laboratory provide scientific and technical training to laboratory personnel from other WOAH Members?
No

TOR8: QUALITY ASSURANCE

18. Does your laboratory have a Quality Management System?
Yes

<table>
<thead>
<tr>
<th>Quality management system adopted</th>
<th>Certificate scan (PDF, JPG, PNG format)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pirbright UKAS Certificate.pdf</td>
</tr>
</tbody>
</table>

19. Is your quality management system accredited?
Yes
20. Does your laboratory maintain a "biorisk management system" for the pathogen and the disease concerned?
Yes
MDV (including MDV serotypes 1, 2 and HVT) causes diseases in poultry species such as chickens, turkey and quails. The viruses are exclusive pathogens of avian species and hence are unlikely to infect and cause any harm to the human. Also, no known risks to the environment have been associated with these viruses. However, sample preparation for qPCR and when the culture of the virus is involved, strictly all of the work will be performed with the appropriate PPE (nitrile gloves and lab coat); and in containment level 2 environment solely for sample protection, and for sterility of cultures in line with group practices for culture of avian herpesviruses.

**TOR9: SCIENTIFIC MEETINGS**

21. Did your laboratory organise scientific meetings related to the pathogen in question on behalf of WOAH?
No
22. Did your laboratory participate in scientific meetings related to the pathogen in question on behalf of WOAH?
No

**TOR10: NETWORK WITH WOAH REFERENCE LABORATORIES**

23. Did your laboratory exchange information with other WOAH Reference Laboratories designated for the same pathogen or disease?
Not applicable (only WOAH Reference Laboratory designated for the disease)
24. Are you a member of a network of WOAH Reference Laboratories designated for the same pathogen?
Not applicable (Only WOAH Reference Laboratory designated for the disease)
25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?
Not applicable (Only WOAH Reference Laboratory designated for the disease)
26. Did your laboratory collaborate with other WOAH Reference Laboratories for the same disease on scientific research projects for the diagnosis or control of the pathogen of interest?
Not applicable (Only WOAH Reference Laboratory designated for the disease)

**TOR11: OTHER INTERLABORATORY PROFICIENCY TESTING**

27. Did your laboratory organise or participate in inter-laboratory proficiency tests with laboratories other than WOAH Reference Laboratories for the same pathogen?
No

**TOR12: EXPERT CONSULTANTS**

28. Did your laboratory place expert consultants at the disposal of WOAH?
No
29. Additional comments regarding your report:

Yes

MDVRL activities have increased in terms of sample submissions, diagnosis advice and requests for methods and protocols. Specifically, the samples submitted from overseas increased significantly from 1 in 2021 to 326 in 2022. We also worked on developing and validating a real-time PCR specific for Prevexxion vaccine. We continue to provide technical advise to queries from many member countries. Most of the activities are carried out using the funding from the Pirbright Institute MDVRL or from charges for the tests, as we do not receive any funding support from the WOAH.