WOAH Reference Laboratory Reports Activities 2023
Activities in 2023
This report has been submitted: 11 juin 2024 01:36

Laboratory Information

| Name of disease (or topic) for which you are a designated WOAH Reference Laboratory: | Anthrax |
| Address of laboratory: | CFIA Lethbridge Lab, Township Road 9-1, Lethbridge Alberta, T1J3Z4 |
| Tel: | 14033825505 |
| E-mail address: | kingsley.amoako@inspection.gc.ca |
| Name (including Title) of Head of Laboratory (Responsible Official): | Dr. Kingsley Amoako, Laboratory Director |
| Name (including Title and Position) of WOAH Reference Expert: | Dr. Kingsley Amoako, Lab Director |
| Which of the following defines your laboratory? Check all that apply: | Governmental |

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)
   No

TOR2: REFERENCE MATERIAL

2. Did your laboratory produce or supply imported standard reference reagents officially recognised by WOAH?
   No
3. Did your laboratory supply standard reference reagents (nonWOAH-approved) and/or other diagnostic reagents to WOAH Members?
   No
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 an WOAH Member?
   Yes

<table>
<thead>
<tr>
<th>NAME OF THE WOAH MEMBER COUNTRY RECEIVING A TECHNICAL CONSULTANCY</th>
<th>PURPOSE</th>
<th>HOW THE ADVICE WAS PROVIDED</th>
</tr>
</thead>
<tbody>
<tr>
<td>NIGERIA</td>
<td>Consulted for advice and support during anthrax outbreak in Nigeria.</td>
<td>Advice was provided through emails and conference calls</td>
</tr>
<tr>
<td>ZAMBIA</td>
<td>Consulted by WOAH and WHO for expert advice on the decontamination and disposal of anthrax infected carcasses during an anthrax outbreak in Zambia.</td>
<td>Provided through emails</td>
</tr>
<tr>
<td>GHANA</td>
<td>Consulted for advice during anthrax outbreak in Northern Ghana</td>
<td>Advice provided through emails and phone calls</td>
</tr>
</tbody>
</table>

**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

13. In exercising your activities, have you identified any regulatory research needs* relevant for WOAH?
   No

**TOR6: EPIZOOTIOLOGICAL 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:

   0

   b) International conferences:

   0

   c) National conferences:

   0

   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?
   Yes
a) Technical visit: 1
b) Seminars: 0
c) Hands-on training courses: 1
d) Internships (>1 month): 0

<table>
<thead>
<tr>
<th>Type of technical training provided (a, b, c or d)</th>
<th>Country of origin of the expert(s) provided with training</th>
<th>No. participants from the corresponding country</th>
</tr>
</thead>
<tbody>
<tr>
<td>A</td>
<td>GHANA</td>
<td>5</td>
</tr>
<tr>
<td>C</td>
<td>GHANA</td>
<td>5</td>
</tr>
</tbody>
</table>

**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>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO/IEC17025</td>
<td>Scanned Certificate attached</td>
<td>Standards Council of Canada</td>
</tr>
</tbody>
</table>

19. Is your quality management system accredited?
   Yes

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>Laboratory Procedures for the isolation and identification of Bacillus anthracis</td>
<td>Standards Council of Canada</td>
</tr>
</tbody>
</table>

20. 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)

**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?
   Yes

<table>
<thead>
<tr>
<th>NETWORK/DISEASE</th>
<th>ROLE OF YOUR LABORATORY (PARTICIPANT, ORGANISER, ETC)</th>
<th>NO. PARTICIPANTS</th>
<th>PARTICIPATING WOAH REF. LABS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sharing information with the WOAH Reference lab for anthrax in Ames, Iowa, USA</td>
<td>Shared relevant information received from other WOAH members regarding anthrax</td>
<td>1</td>
<td>WOAH Reference Lab for anthrax in Ames, Iowa, USA</td>
</tr>
<tr>
<td>Collaboration on anthrax</td>
<td>Worked with the WOAH Reference Lab expert for anthrax in the revision and update of Chapter 3.1.1 Anthrax in the WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals</td>
<td>1</td>
<td>WOAH Reference Lab for anthrax in Ames, Iowa, USA</td>
</tr>
</tbody>
</table>

25. Did you organise or participate in inter-laboratory proficiency tests with WOAH Reference Laboratories designated for the same pathogen?
   No

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?
   No
**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?

Yes

<table>
<thead>
<tr>
<th>KIND OF CONSULTANCY</th>
<th>Location</th>
<th>SUBJECT (FACULTATIVE)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Request from WOAH to update Chapter 3.1.1 Anthrax to include a new easier to produce Bacillus anthracis capsule stain</td>
<td>Remotely</td>
<td>updated for the WOAH Manual of Diagnostic Tests and Vaccines for Terrestrial Animals</td>
</tr>
<tr>
<td>Participated in expert panel led by the Chief Science Advisor for Canada</td>
<td>Remotely</td>
<td>Arctic Thaw Expert panel discussion</td>
</tr>
<tr>
<td>Participated in meetings with the Global Partnership Program on Signature Initiative under the Auspices of the Africa Centre for Disease Control</td>
<td>Remotely</td>
<td>Africa Centre for Disease Control</td>
</tr>
</tbody>
</table>

29. Additional comments regarding your report:

Yes

In 2023, the WOAH Reference lab for Anthrax in Lethbridge, Canada continued to provide technical advice for WOAH member labs remotely as indicated in this Annual Report. The Reference lab continued to support the Veterinary Services Lab in Pong Tamale in Ghana in building capacity for diagnostic work with anthrax. The WOAH Reference lab expert for anthrax at the Lethbridge Lab was able to travel to Ghana to provide hands-on training on anthrax in March 2023 to the Pong Tamale veterinary Lab in Ghana. This was successful and included a mock exercise on the detection of anthrax. This exercise delineated the procedure and workflow to be used in case of an anthrax outbreak. All the 5 participants in the training became familiar with the entire process from sample receiving to the release of test results. The training involved the use of supplies and test kits provided by the Reference lab here in Canada. It is worth noting that the training, equipment, PPEs and supplies provided to the Pong Tamale lab in Ghana in March 2023 for anthrax detection enabled the lab to successfully respond to the anthrax outbreak in Northern Ghana in July, 2023. It is anticipated that the training of the veterinary lab staff in Ghana for anthrax detection will continue to provide the lab with the capacity to detect anthrax. The Lethbridge WOAH Reference laboratory for Anthrax remains active in providing scientific support to other labs around the world. The high level of scrutiny on issues related to anthrax as a bioterrorism agent makes moving samples from one lab to the Reference lab or vice versa a huge challenge and this imposes a significant limitation on international diagnostic activity. The CFIA is committed to maintaining and enhancing the WOAH Reference Laboratory for Anthrax. Currently there is no diagnostic testing at the Reference lab as all anthrax testing is now done by the Provincial labs. There is ongoing discussion on diagnostic testing activities that would enhance the WOAH Reference Laboratory status, and further ensure preparedness in the event of intentional contamination of the food supply. The lab continues to maintain close contact with the WOAH Reference Lab in Ames, Iowa in the review and response to international requests. Furthermore, consultations are now ongoing with other Canadian Federal government stakeholders including the Public Health Agency Canada and Department of Defense to determine areas of potential collaboration to enhance the activities of the Reference lab.

The Lethbridge WOAH Reference Lab for Anthrax continues to work with the Ghana Veterinary services to help build capacity for anthrax diagnostic detection and readiness to respond to any potential bioterror event related to the use of anthrax. As part of this, the Lethbridge WOAH Reference lab for Anthrax has provided expert technical training on biosafety/biosecurity, SOP development, QA and state of the art anthrax detection methods to technical staff at the Pong Tamale veterinary lab in Ghana. The WOAH Reference lab for anthrax continues to lead the project on High-consequence pathogens detection which is funded by the Canadian Safety and Security Program (CSSP) under the leadership of Dr. Chad Laing. One of the pathogens of interest in the project is Bacillus anthracis. This project is exploring the use of Artificial Intelligence for front-line laboratories in preparing for high-consequence pathogens detection to reduce their risk.

The Lethbridge WOAH Reference lab for Anthrax will in future benefit from twinning with other labs in Africa to share expertise, provide technical support and help build capacity for anthrax testing and diagnostics based on the experience gained in working with the Ghana Veterinary Services. This will also raise the level of support for international diagnostic testing activities.