# OIE Reference Laboratory Reports Activities

## Activities in 2018

This report has been submitted: 2019-01-13 08:07:06

<table>
<thead>
<tr>
<th>Name of disease (or topic) for which you are a designated OIE Reference Laboratory:</th>
<th>Bovine babesiosis</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Address of laboratory:</strong></td>
<td>National Research Center for Protozoan Diseases, Obihiro University of Agriculture and Veterinary Medicine Nishi 2-13, Inada-cho Obihiro, Hokkaido 080-8555 JAPAN</td>
</tr>
<tr>
<td><strong>Tel.</strong></td>
<td>+81-155-49-5641</td>
</tr>
<tr>
<td><strong>Fax</strong></td>
<td>+81-155-49-5643</td>
</tr>
<tr>
<td><strong>E-mail address:</strong></td>
<td><a href="mailto:igarcpmi@obihiro.ac.jp">igarcpmi@obihiro.ac.jp</a></td>
</tr>
<tr>
<td><strong>Website:</strong></td>
<td><a href="http://www.obihiro.ac.jp/~protozoa/eng/index-eng.html">http://www.obihiro.ac.jp/~protozoa/eng/index-eng.html</a></td>
</tr>
<tr>
<td><strong>Name (including Title) of Head of Laboratory (Responsible Official):</strong></td>
<td>Prof. Ikuo Igarashi, DVM, Phd</td>
</tr>
<tr>
<td><strong>Name (including Title and Position) of OIE Reference Expert:</strong></td>
<td>Prof. Ikuo Igarashi, DVM, Phd</td>
</tr>
<tr>
<td><strong>Which of the following defines your laboratory? Check all that apply:</strong></td>
<td>Academic</td>
</tr>
</tbody>
</table>
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

<table>
<thead>
<tr>
<th>Diagnostic Test</th>
<th>Indicated in OIE Manual (Yes/No)</th>
<th>Nationally</th>
<th>Internationally</th>
</tr>
</thead>
<tbody>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. bovis ELISA</td>
<td>Yes</td>
<td>0</td>
<td>442</td>
</tr>
<tr>
<td>B. bigemina ELISA</td>
<td>Yes</td>
<td>0</td>
<td>442</td>
</tr>
<tr>
<td>B. bovis Immunochr</td>
<td>No</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>B. bigemina Immunochr</td>
<td>No</td>
<td>0</td>
<td>150</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>B. bovis PCR &amp; nPCR</td>
<td>Yes</td>
<td>91</td>
<td>727</td>
</tr>
<tr>
<td>B. bigemina PCR &amp; nPCR</td>
<td>Yes</td>
<td>91</td>
<td>727</td>
</tr>
</tbody>
</table>

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
<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 OIE Member Countries</th>
<th>Region of recipients</th>
</tr>
</thead>
<tbody>
<tr>
<td>B. bovis recombinant antigen</td>
<td>ELISA, ICT</td>
<td>produced and provide</td>
<td>4 mg</td>
<td>2 mg</td>
<td>2</td>
<td>□Africa □Americas □Asia and Pacific □Europe □Middle East</td>
</tr>
<tr>
<td>B. bigemina recombinant antigen</td>
<td>ELISA, ICT</td>
<td>Produced/provide</td>
<td>4 mg</td>
<td>2 mg</td>
<td>2</td>
<td>□Africa □Americas □Asia and Pacific □Europe □Middle East</td>
</tr>
</tbody>
</table>

4. Did your laboratory produce vaccines?
No

5. Did your laboratory supply vaccines to OIE Member Countries?
No

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

6. Did your laboratory develop new diagnostic methods validated according to OIE Standards for the designated pathogen or disease?
No

7. Did your laboratory develop new vaccines according to OIE Standards for the designated pathogen or disease?
No

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

8. Did your laboratory carry out diagnostic testing for other OIE Member Countries?
Yes
9. Did your laboratory provide expert advice in technical consultancies on the request of an OIE Member Country?

No

**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

<table>
<thead>
<tr>
<th>Title of the study</th>
<th>Duration</th>
<th>Purpose of the study</th>
<th>Partners (Institutions)</th>
<th>OIE Member Countries involved other than your country</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serological and molecular survey of bovine piroplasmosis</td>
<td>2 years</td>
<td>Epidemiological status of bovine piroplasmosis diagnostic tests</td>
<td>Fue University</td>
<td>VIETNAM</td>
</tr>
<tr>
<td>Molecular survey of bovine tick-borne diseases</td>
<td>2 years</td>
<td>Epidemiological status of bovine tick-borne diseases</td>
<td>Makerere University, College of Veterinary Medicine</td>
<td>UGANDA</td>
</tr>
<tr>
<td>Molecular survey of bovine tick-borne diseases</td>
<td>3 years</td>
<td>Epidemiological status of bovine piroplasmosis</td>
<td>Institute of Veterinary Medicine, Mongolian University of Life Sciences</td>
<td>MONGOLIA</td>
</tr>
<tr>
<td>Serological and molecular survey of bovine piroplasmosis</td>
<td>5 years</td>
<td>Epidemiological status of bovine piroplasmosis</td>
<td>Veterinary Research Institute</td>
<td>SRI LANKA</td>
</tr>
</tbody>
</table>

**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: 11

b) International conferences: 7


c) National conferences: 19


4. Rika Umemiya-Shirafuji, Noboru Inoue, Kiyoshi Okado, Naoaki Yokoyama, Kozo Fujisaki, Hiroshi Suzuk, Xuenan Xuan. Tick research activities at National Research Center for Protozoan Diseases. 70th Annual Meeting of the Japan Society of Medical Entomology and Zoology, Obihiro, Japan, May 12-13, 2018.


Bovine babesiosis - Ikuo Igarashi - Japan


15. Gaber El-Saber Batiha, Amany Magdy Beshbishy, Naoaki Yokoyama and Ikuo Igarashi. Inhibitory effects of methanolic Olea europaea and acetonic Acacia laeta herbal crude extracts on the growth of Babesia and Theileria. The 64th Joint Annual Meeting of Northern Branches of the Japanese Society of Parasitology and the Japan Society of Medical Entomology and Zoology, Sapporo, Japan, October 13, 2018.


18. Arifin Budiman Nugraha, Bumdureen Tuvsintulga, Mohamed Abdo Rizk, Sambuu Gantuya, Gaber El-Saber Batiha, Thillaiampalam Sivakumar, Naoaki Yokoyama, Ikuo Igarashi. Screening the Medicines for Malaria Venture Pathogen Box against piroplasm parasites. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, November 11, 2018.

19. Gaber El-Saber Batiha, Amany Magdy Beshbishy, Naoaki Yokoyama and Ikuo Igarashi. Inhibitory effects of ivermectin on the growth Babesia and Theileria. The 59th Annual Scientific Meeting for the Japanese Society of Tropical Medicine, Nagasaki, November 11, 2018.

d) Other:
(Provide website address or link to appropriate information) 1

http://www.obihiro.ac.jp/~protozoa/eng/index-eng.html

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:  10
  c) Hands-on training courses:   8
  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>Mexico</td>
<td>1</td>
</tr>
<tr>
<td>b</td>
<td>China</td>
<td>10</td>
</tr>
<tr>
<td>c</td>
<td>Mongolia</td>
<td>8</td>
</tr>
</tbody>
</table>

**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

<table>
<thead>
<tr>
<th>Quality management system adopted</th>
<th>Certificate scan (PDF, JPG, PNG format)</th>
</tr>
</thead>
<tbody>
<tr>
<td>ISO17025</td>
<td>ISO17025 Accreditation. pdf.pdf</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Test for which your laboratory is accredited</th>
<th>Accreditation body</th>
</tr>
</thead>
<tbody>
<tr>
<td>PCR for Babesia bovis</td>
<td>Perry Johnson laboratory Accreditation, Inc. (PJLA)</td>
</tr>
<tr>
<td>PCR for Babesia bigemina</td>
<td>Perry Johnson laboratory Accreditation, Inc. (PJLA)</td>
</tr>
</tbody>
</table>

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?

No

**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?

No

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

Yes

<table>
<thead>
<tr>
<th>Title of the project or contract</th>
<th>Scope</th>
<th>Name(s) of relevant OIE Reference Laboratories</th>
</tr>
</thead>
<tbody>
<tr>
<td>Evaluation of diagnostic tests for bovine babesiosis</td>
<td>International of validation of diagnostic test</td>
<td>Instalaciones del Centro nacional de Servicios de Constatación en Salud Animal, Mexico</td>
</tr>
</tbody>
</table>

**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?

No

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
**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: