OIE Reference Laboratory Reports Activities

Activities in 2014

This report has been submitted : 2015-03-04 09:21:55

| Name of disease (or topic) for which you are a designated OIE Reference Laboratory: | White spot disease |
| Address of laboratory: | College of Bioscience and Biotechnology National Cheng Kung University, No.1, University Road, Tainan City 701 CHINESE TAIPEI |
| Tel.: | +886-6-2757575*31011 |
| Fax: | +886-6-2083663 |
| E-mail address: | gracelow@mail.ncku.edu.tw |
| Website: | http://webap.rsh.ncku.edu.tw/shrimpwssv/ |
| Name (including Title) of Head of Laboratory (Responsible Official): | Prof./Dr. Grace Chu-Fang Lo |
| Name (including Title and Position) of OIE Reference Expert: | Prof./Dr. Grace Chu-Fang Lo |
| Which of the following defines your laboratory? Check all that apply: | Academic |
**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>Total number of test performed last year</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Nationally</td>
</tr>
<tr>
<td>Indirect diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Western blot assay</td>
<td>Yes</td>
<td>20</td>
</tr>
<tr>
<td>Direct diagnostic tests</td>
<td></td>
<td></td>
</tr>
<tr>
<td>PCR</td>
<td>Yes</td>
<td>200</td>
</tr>
<tr>
<td>Real-time PCR for genome copy</td>
<td>Yes</td>
<td>600</td>
</tr>
<tr>
<td>Real-time PCR for WSSV gene</td>
<td>No</td>
<td>200</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>WSSV virion</td>
<td>PCR, Western blot</td>
<td>Produced</td>
<td>0.5 ml</td>
<td>10 ml</td>
<td>2</td>
<td>□ Africa □ Americas □ Asia and Pacific □ Europe □ Middle East</td>
</tr>
<tr>
<td>WSSV protein specific antibody</td>
<td>ELISA, Western blot</td>
<td>Produced</td>
<td>15 ml</td>
<td>10 ml</td>
<td>4</td>
<td>□ Africa □ Americas □ Asia and Pacific □ Europe □ Middle East</td>
</tr>
<tr>
<td>Recombinant Plasmid containing the WSSV gene</td>
<td>PCR, Western blot</td>
<td>Produced</td>
<td>0 ml</td>
<td>2 ml</td>
<td>1</td>
<td>□ Africa □ Americas □ Asia and Pacific □ Europe □ Middle East</td>
</tr>
<tr>
<td>WSSV viral protein</td>
<td>ELISA, VOPA</td>
<td>Produced</td>
<td>0 ml</td>
<td>20 mg</td>
<td>1</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

<table>
<thead>
<tr>
<th>Name of OIE Member Country seeking assistance</th>
<th>Date (month)</th>
<th>No. samples received for provision of diagnostic support</th>
<th>No. samples received for provision of confirmatory diagnoses</th>
</tr>
</thead>
<tbody>
<tr>
<td>MADAGASCAR</td>
<td>November, December</td>
<td>600</td>
<td>0</td>
</tr>
<tr>
<td>MOZAMBIQUE</td>
<td>December</td>
<td>131</td>
<td>0</td>
</tr>
</tbody>
</table>

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

<table>
<thead>
<tr>
<th>Name of the OIE Member Country receiving a technical consultancy</th>
<th>Purpose</th>
<th>How the advice was provided</th>
</tr>
</thead>
<tbody>
<tr>
<td>MADAGASCAR</td>
<td>Lab design, lab technical training, inter-calibration and ring test, and prevention of occurrence of WSD in shrimp farms</td>
<td>In loco and remote assistance</td>
</tr>
</tbody>
</table>

**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)
--- | --- | --- | ---
Generation of a protein-interaction map between WSSV proteins | 3 years | This work will demonstrate the importance of several proteins for WSSV replication and disease progression and presents them appropriately as excellent future targets for antiviral therapy | The National Science and Technology Development Agency and Mahidol University
Interaction between WSSV proteins and ALFPm3, and other shrimp proteins | 3 years | Elucidate anti-WSSV mechanism of ALFPm3 and other anti-WSSV proteins | Department of Biochemistry, Faculty of Science, Chulalongkorn University
Host genes that are required in WSSV replication cycle | 3 years | Understanding the host-WSSV interaction | Department of Comparative Physiology, Uppsala University

**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?

No

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: 9

b) International conferences:  6

c) National conferences: 0
d) Other:
(Provide website address or link to appropriate information) 2

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: 10
b) Seminars: 0
c) Hands-on training courses: 0
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>Madagascar</td>
<td>10</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?

No

<table>
<thead>
<tr>
<th>Explain Quality Management System in adoption process or currently in place</th>
</tr>
</thead>
<tbody>
<tr>
<td>17025 in preparation</td>
</tr>
</tbody>
</table>

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

No

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 2014, Chapter 1.1.3a)

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?

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](http://www.oie.int/en/our-scientific-expertise/reference-laboratories/proficiency-testing) see point 1.3*

<table>
<thead>
<tr>
<th>Purpose for inter-laboratory test comparisons</th>
<th>No. participating laboratories</th>
<th>Region(s) of participating OIE Member Countries</th>
</tr>
</thead>
<tbody>
<tr>
<td>Harmonising existing test methods (specify: Realtime PCR for WSSV detection)</td>
<td>5</td>
<td>Africa, Americas, Asia and Pacific, Europe, Middle East</td>
</tr>
</tbody>
</table>

**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: