Report on OIE Biological Standards Commission Activities

Beverly Schmitt
OIE Biological Standards Commission
Biological Standard Commission (BSC)

Members

- Vincenzo Caporale (Italy) - President
- Hualan Chen (China) – Vice-President
- Rodolfo Rivera (Uruguay) Vice-President
- Beverly Schmitt (US) - Member
- Paul Townsend (UK) - Member
- Peter Daniels – (Aus) Member
BSC Activities

- Formal meetings twice/year
- Formation of Ad Hoc groups
- Approval of OIE Reference Labs and Collaborating Centers
- Laboratory Twinning
- International Standards
  - Manual of Diagnostic Tests and Vaccines for Terrestrial Animals
  - Reference reagents
- Other Activities
  - Liaison with other OIE Commissions
  - Conferences, workshops, meetings
BSC Ad Hoc Groups

- Ad Hoc groups active in 2013/14

- Biosafety and biocontainment standard for veterinary laboratories – addressed country comments on draft biorisk chapter; BSC harmonizing with existing chapter regarding containment levels

- High throughput sequencing, bioinformatics and computational genomics – collect sequencing info from ref labs

- Disease of camelids – epidemiology of MERS
OIE Reference/Collaborating Centers
New Labs/CCs in United States

- Collaborating Center for Laboratory Biorisk Management
  - Sandia National Laboratories, Albuquerque, NM
    - Expert: Dr. Jennifer Gaudioso

- Collaborating Center for Biological Threat Reduction
  - Institute for Infectious Animal Diseases, TX
    - Expert: Dr. Tammy Beckham

- NVSL Application for Antimicrobial Resistance Reference Lab-directed to partner with current FDA Collaborating Center
Reference laboratories & Collaborating Centers

- 2013 Annual Reports received
  - Reference laboratories = 197/199
  - Collaborating Centers = 42/45

- A new on-line template for ref lab and collab center annual report input was used successfully for the 2012 reports

- A structured approach to monitoring Reference Centers has been developed to assess non-reporting, under-performance or other problematic issues. This approach could include missions to the Centers.

- Emphasis being placed on ISO 17025 or equivalent accreditation for OIE reference laboratories
RELATIVE DISTRIBUTION OF OIE COLLABORATING CENTRES AND REFERENCE LABORATORIES PER REGIONS AND SUB-REGIONS

- **Europe**: 44.4%
- **North America**: 23.1%
- **Asia and Oceania**: 19.5%
- **Central and South America**: 6.5%
- **Africa**: 5.4%
- **Middle East**: 1.1%
Twinning
U.S. Projects

- Avian influenza and Newcastle Disease
  - U.S. and Brazil – completed
  - U.S. and Chile – completed

- Epidemiology
  - U.S. and China – underway

- FMD
  - U.S. and Mongolia – approved and due to commence

- EIA
  - U.S. and Argentina – still awaiting funding
Twinning
U.S. Projects

- **Infectious hematopoietic necrosis**
  - U.S and China – approved

- **Rabies**
  - U.S. and India – approved

- **Crustacean/shrimp diseases**
  - U.S. and Indonesia – approved
Updating the Manual of Diagnostic Tests and Vaccines for Terrestrial Animals

- Chapters in Manual are standards - guidelines or other general recommendations have been removed or placed at the end in a section that is clearly separate.

- Chapters now have fit for purpose table – proposal to move away from prescribed and alternative tests.
### B. Diagnostic Techniques

**Table 1. Test methods available for the diagnosis of avian infectious laryngotracheitis and their purpose**

<table>
<thead>
<tr>
<th>Method</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Population freedom from infection</td>
</tr>
<tr>
<td>Virus isolation</td>
<td>–</td>
</tr>
<tr>
<td>Immuno-fluorescence for antigen</td>
<td>–</td>
</tr>
<tr>
<td>ELISA – antigen detection</td>
<td>+</td>
</tr>
<tr>
<td>PCR</td>
<td>++</td>
</tr>
<tr>
<td>Histopathology</td>
<td>–</td>
</tr>
</tbody>
</table>

#### Agent Identification

<table>
<thead>
<tr>
<th>Method</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>Virus isolation</td>
<td>–</td>
</tr>
<tr>
<td>Immuno-fluorescence for antigen</td>
<td>–</td>
</tr>
<tr>
<td>ELISA – antigen detection</td>
<td>+</td>
</tr>
<tr>
<td>PCR</td>
<td>++</td>
</tr>
<tr>
<td>Histopathology</td>
<td>–</td>
</tr>
</tbody>
</table>

#### Detection of immune response

<table>
<thead>
<tr>
<th>Method</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>VN</td>
<td>+</td>
</tr>
<tr>
<td>ELISA – antibody detection</td>
<td>++</td>
</tr>
</tbody>
</table>

Key: +++ = recommended method; ++ = suitable method; + = may be used in some situations, but cost, reliability, or other factors severely limits its application; – = not appropriate for this purpose.

Although not all of the tests listed as category +++ or ++ have undergone formal validation, their routine nature and the fact that they have been used widely without dubious results, makes them acceptable.

ELISA = Enzyme-linked immunosorbent assay; PCR = polymerase chain reaction; VN = virus neutralisation.
Joint Committee on Rinderpest has focused on sequestration of RPV in a minimal number of laboratories.

Four countries have sent proposals to be RPV holding facilities.

JAC reviewed and given support to OIE/FAO.

Inspections will commence in very near future.

NVSL/FADDL has submitted proposal.
OIE/FAO Joint Advisory Committee on rinderpest

- JAC has had input on the OIE/FAO communication strategy for virus destruction and sequestration

- JAC has also developed guidelines for the following:
  - Approval for RPV research projects
  - Holding facilities

- Development of international preparedness plans
Questions?