**OIE Collaborating Centres Reports Activities**  
*Activities in 2015*

This report has been submitted: 2016-01-22 04:13:20

<table>
<thead>
<tr>
<th>Title of collaborating centre:</th>
<th>Laboratory Capacity Building</th>
</tr>
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<tbody>
<tr>
<td><strong>Address of Collaborating Centre:</strong></td>
<td>CSIRO Livestock Industries 5 Portarlington Road Private Bag 24 (Ryrie Street) Geelong 3220, Victoria AUSTRALIA</td>
</tr>
<tr>
<td>Tel.:</td>
<td>+61-3 52 27 50 14</td>
</tr>
<tr>
<td>Fax:</td>
<td>+61-3 52 27 55 55</td>
</tr>
<tr>
<td>E-mail address:</td>
<td><a href="mailto:sam.mccullough@csiro.au">sam.mccullough@csiro.au</a></td>
</tr>
<tr>
<td>Website:</td>
<td><a href="http://www.csiro.au">www.csiro.au</a></td>
</tr>
<tr>
<td>Name of Director of Institute (Responsible Official):</td>
<td>Dr Kurt Zuelke - Director</td>
</tr>
<tr>
<td>Name (including Title and Position) of Head of the Collaborating Centre (formally OIE Contact Point):</td>
<td>Dr Sam McCullough- Deputy Director</td>
</tr>
<tr>
<td>Name of writer:</td>
<td>Dr Sam McCullough</td>
</tr>
</tbody>
</table>
ToR: To provide services to the OIE, in particular within the region, in the designated specialty, in support of the implementation of OIE policies and, where required, seek for collaboration with OIE Reference Laboratories

ToR: To identify and maintain existing expertise, in particular within its region

1. Activities as a centre of research, expertise, standardisation and dissemination of techniques within the remit of the mandate given by the OIE

<table>
<thead>
<tr>
<th>Training, capacity building</th>
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<tbody>
<tr>
<td>Title of activity</td>
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<tr>
<td>Consultancy Agreement under the Australia Indonesia Partnership -EID, provision of laboratory support.</td>
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<tr>
<th>Zoonoses</th>
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<tr>
<td>Title of activity</td>
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<tr>
<td>Diagnostic preparedness for emerging zoonotic avian influenza strains</td>
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<tr>
<th>Diagnosis, biotechnology and laboratory</th>
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<tr>
<td>Title of activity</td>
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<tr>
<td>Regional proficiency testing program for Aquatic Animal Disease laboratories in Asia</td>
</tr>
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ToR: To propose or develop methods and procedures that facilitate harmonisation of international standards and guidelines applicable to the designated specialty

2. Proposal or development of any procedure that will facilitate harmonisation of international regulations applicable to the surveillance and control of animal diseases, food safety or animal welfare

<table>
<thead>
<tr>
<th>Proposal title</th>
<th>Scope/Content</th>
<th>Applicable area</th>
</tr>
</thead>
</table>
Development of Standards for High Throughput Sequencing, Bioinformatics and Computational genomics (HTS- BCG) | Laboratory exchange visits and international collaborations to develop such systems for use in the home laboratory and to harmonize with similar activities initiated under the auspices of the OIE | ☐Surveillance and control of animal diseases ☐Food safety ☐Animal welfare

**ToR: To establish and maintain a network with other OIE Collaborating Centres designated for the same specialty, and should the need arise, with Collaborating Centres in other disciplines**

**ToR: To carry out and/or coordinate scientific and technical studies in collaboration with other centres, laboratories or organisations**

3. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres (CC), Reference Laboratories (RL), or organisations designated for the same specialty, to coordinate scientific and technical studies?

Yes

<table>
<thead>
<tr>
<th>Name of OIE CC/RL/other organisation(s)</th>
<th>Location</th>
<th>Region of networking Centre</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>International Newcastle Disease virus taxonomy initiative</td>
<td>Athens, Georgia, USA</td>
<td>☐Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East</td>
<td>Harmonization of the clade assignment of isolates of APMV-1</td>
</tr>
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4. Did your Collaborating Centre maintain a network with other OIE Collaborating Centres, Reference laboratories, or organisations in other disciplines, to coordinate scientific and technical studies?

Yes

<table>
<thead>
<tr>
<th>Name of OIE CC/RL/other organisation(s)</th>
<th>Location</th>
<th>Region of networking Centre</th>
<th>Purpose</th>
</tr>
</thead>
<tbody>
<tr>
<td>OFFLU</td>
<td>a global network</td>
<td>☐Africa ☐Americas ☐Asia and Pacific ☐Europe ☐Middle East</td>
<td>Coordination of the science underpinning the management and control of influenza in animals</td>
</tr>
</tbody>
</table>

**ToR: To place expert consultants at the disposal of the OIE.**

5. Did your Collaborating Centre place expert consultants at the disposal of the OIE?
**ToR: To provide, within the designated specialty, scientific and technical training to personnel from OIE Member Countries**

6. Did your Collaborating Centre provide scientific and technical training, within the remit of the mandate given by the OIE, to personnel from OIE Member Countries?

Yes

- a) Technical visits: 59
- b) Seminars: 85
- c) Hands-on training courses: 119
- d) Internships (>1 month): 0

<table>
<thead>
<tr>
<th>Type of technical training provided (a, b, c or d)</th>
<th>Content</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>C</td>
<td>Backstopping mission to participating laboratories in emergency surveillance and response in multi-disease training</td>
<td>ASEAN countries</td>
<td>54</td>
</tr>
</tbody>
</table>

**ToR: To organise and participate in scientific meetings and other activities on behalf of the OIE**

7. Did your Collaborating Centre organise or participate in the organisation of scientific meetings on behalf of the OIE?

No

**ToR: To collect, process, analyse, publish and disseminate data and information relevant to the designated specialty**

8. Publication and dissemination of any information within the remit of the mandate given by the OIE that may be useful to Member Countries of the OIE

a) Articles published in peer-reviewed journals: 33

1. Boyd, Vicky; Smith, Ina; Crameri, Gary; Burroughs, Amy; Durr, Peter; White, John; et al. Development of multiplexed bead arrays for the simultaneous detection of multiple viruses in bat samples. Journal of Virological methods. 2015; 233:5-12.

3. Burniston, Stephanie; Okello, Anna; Khamlome, Boualam; Inthavong, Phouth; Gilbert, Jeffrey; Blacksell, Stuart D; Allen, John; Welburn, Susan. Cultural drivers and health-seeking behaviours that impact on the transmission of pig-associated zoonoses in Lao People's Democratic Republic. Infectious Diseases of Poverty. 2015; 4:11:0.

4. Okello, Anna; Burniston, James; Conlan, V; Inthavong, Phouth; Khamlome, Boualam; Welburn, Susan; Gilbert, Jeffrey; Allen, John; Blacksell, Stuart. Prevalence of endemic pig-associated zoonoses in Southeast Asia: A review of findings from the Lao People's Democratic Republic. The American Journal of Tropical Medicine and Hygiene. 2015; 14-0551

5. Ching, Paola; Carr de los Reyes, Vikki; Sucaldito, Maria; Columna-Vingno, Alah; Malbas, Fedelino; Bolo Jr, Gilbert; et al. Outbreak of Henipavirus Infection, Philippines, 2014. Emerging Infectious Diseases. 2015; 21(2):ahead of print.


9. Hartaningsih, Ninig; Wibawa, Hendra; Pudjiamtoko, Pak; Sumping Tjatur Rasa, Fadjar; Irianingsih, Sri Handayani; Dharmawan, Rama; Azhar, Muhammad; Sawitri, Elly; McGrane, James; Wong, Frank; Selleck, Paul; Allen, John; Broz, Ivan; Torchetti, Mia Kim; Dauphin, Gwenaëlle; Claes, Filip; Sastraningrat, Wiriyadi; Durr, Peter. Surveillance at the molecular level: developing an integrated network for detecting variation in avian influenza viruses in Indonesia. Preventive Veterinary Medicine. 2015; 120(1):96-105.


12. Mohr, Peter; Moody, Nick; Williams, Nette; Hoad, John; Cummins, David; Crane, Mark. Molecular confirmation of infectious spleen and kidney necrosis virus (ISKNV) in farmed and imported ornamental fish in Australia. Diseases of Aquatic Organisms. 2015; 116(2):103-110.


16. Vosloo, Wilna; Nguyen, Thi Thu Hong; Fosgate, Geoffry; Morris, Jacqui; Wang, Jianning; Kim, Phuc; et al. Efficacy of a high potency O1 Manisa monovalent vaccine against heterologous challenge with a FMDV O Mya98 lineage virus in pigs 4 and 7 days post vaccination. Vaccine. 2015;

17. Wong, Frank; Phommachanh, Phouvong; Kalpravidh, Wanteanee; Chanthavisouk, Chintana; Gilbert, Jeff;
Bingham, John; et al. Reassortant Highly Pathogenic Avian Influenza H5N6 Virus in Laos. Emerging Infectious Diseases. 2015; 21(3):511-516.

18. Nuradji, Harimurti; Bingham, John; Lowther, Sue; Wirawka, Hendra; Colling, Axel; Thanh Long, Ngo; Meers, Joanne. A comparative evaluation of feathers, oropharyngeal swabs, and cloacal swabs for the detection of H5N1 highly pathogenic avian influenza virus infection in experimentally infected chickens and ducks. Journal of Veterinary Diagnostic Investigation. 2015 Vol 27(6) 704-715


26. Boshra, Hani; Truong, Thang; Nfon, Charles; Bowden, Timothy; Gerdts, Volker; Tikoo, Suresh; et al. A lumpy skin disease virus deficient of an IL-10 gene homologue provides protective immunity against virulent capripoxvirus challenge in sheep and goats. Antiviral Research. 2015; 123:39-49.


28. Onyango, Maria; Beebe, Nigel; Gopurenko, David; Bellis, Glenn; Nicholas, Adrian; Ogugo, Moses; et al. Assessment of population genetic structure in the arbovirus vector midge, Culicoides brevitarsis (Diptera: Ceratopogonidae), using multi-locus DNA microsatellites. veterinary research. 2015; 46:Article 108.

29. Onyango, Maria; Ngondi, Michuki; Venter, Gert; Miranda-Chueca, Miguel; Elissa, Nohal; Djikeng, Appolinaire; et al. Delineation of the population genetic structure of Culicoides imicola in East and South Afric. Parasites and Vectors. 2015; 8(660):13.


31. Shanmugam, Yuvaraj; Muthukrishnan, Madhanmohan; Singanallur, Nagendra; Villuppanoor, Srinivasan. Phylogenetic analysis of the leader proteinase (Lpro) region of Indian foot and mouth disease serotype O isolates. BVeterinaria italiana. 2015; 51 (1):31-37.

32. Tuppurainen, Eeva; Venter, Estelle; Shisler, Joanna; Gari, Getachew; Mekonnen, Getnet; Juleff, Nick; et al. Capripoxvirus diseases: current status and opportunities for control. Transboundary and Emerging Diseases. 2015; Online in press:17 p.

33. Walker, Peter; Widen, Steve; Firth, Cadhla; Blasdell, Kim; Wood, Thomas; Travassos da Rosa, Amelia; et al.

b) International conferences:  
1. Durr, Peter; Graham, Kerryn. Seasonality of MERS-CoV in the Arabian Peninsula - with some parallel lessons from seasonality of Hendra virus in Australia. Regional Workshop on MERS-CoV and One Health, 27-29 April 2015 Doha, Qatar

2. Durr, Peter; Broz, Ivan; Graham, Kerryne; Wang, Jianning; Wong, Frank; McCullough, Sam. Next Generation Surveillance Systems – integrating whole genome sequencing data into real-time detection and control (of TADs / EADs). In: International Symposium of the World Association of Veterinary Laboratory Diagnosticians; 17th June 2015; Saskatoon, Canada.


8. Wong, Frank; Stevens, Vicky; Dauphin, Gwenaelle. Tracking Genetic Evolution of Avian Influenza Viruses and Related Challenges. In: International Symposium of the World Association of Veterinary Laboratory Diagnosticians; 15-18 June 2015; Saskatoon, Canada. WAVLD; 2015. 1


c) National conferences:  
1. Corbeil, Serge; Williams, Nette; Cowley, Jeff; McColl, Ken; Mohr, Peter; Crane, Mark. Determination of susceptibility of various abalone species and populations to the various known abalone herpesvirus genotypes. In: 3rd FRDC Australasian Aquatic Animal Health Scientific Conference; 6-10 July 2015; Cairns, Australia. FRDC; 2015. Presentation.


3. Mohr, Peter; Moody, Nick; Hoad, John; Williams, Nette; Crane, Mark. Molecular characterization of Orthomyxo-like viruses isolated from pilchards and Atlantic salmon in Australia. In: 3rd FRDC Australasian Scientific Conference on Aquatic Animal Health; 6-10 July 2015; Cairns, QLD. FRDC; 2015. 1.


5. Stewart C. Genome-Wide SIRNA screening at biosafety level 4 reveals a crucial role for fibrillarin in Henipavirus


d) Other
(Provide website address or link to appropriate information): 11


Reports/Report Chapters


6. Gudkovs, Nicholas; Slater, Joanne; McColl, Ken; Handayani, Christina Retna; Crane, Mark. Tactical Research Fund Aquatic Animal Health Subprogram: Determining the susceptibility of Australian species of prawns to infectious myonecrosis. FRDC: FRDC; 2015. csiro:EP154575

http://www.who.int/influenza/vaccines/virus/201502_zoonotic_vaccinesupdate.pdf
http://www.who.int/influenza/vaccines/virus/201509_zoonotic_vaccinesupdate.pdf
http://www.who.int/influenza/gisrs_laboratory/h5n1_nomenclature/en/