

ISSUE 15 (SEPTEMBER 2011)

# SCAHLs

NEWSLETTER

SUB-COMMITTEE ON ANIMAL HEALTH LABORATORY STANDARDS

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## FMD Vulnerability Research Program

Foot and mouth disease (FMD) is of major concern to the Australian livestock industries given it has the potential to cause losses in excess of \$12 billion per year. Because Australia is free of FMD, no work using infectious ('live') FMD virus can be conducted here. However, to further enhance Australia's capability to respond to FMD incursion, some research based on the use of live virus is essential, and as such industry and the Commonwealth Government are currently funding an offshore research program that requires work with live FMD virus. The work is being undertaken by the Australian Animal Health Laboratory (AAHL) and will provide a better understanding of the protection that the vaccine strains in Australia's FMD vaccine bank provide. It will also investigate the pathogenesis of South-East Asian FMD virus strains in equivalent Australian domestic species, provide field validation of pen-side assays, explore the molecular epidemiology of FMD in South-East Asia, and build capacity as part of pre-border risk mitigation. Funding is provided through Meat and Livestock Australia's (MLA's) Donor Company and initially will be for two years, with an expectation

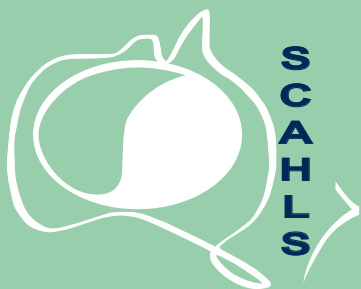
of an extension for three more years. The contracts between CSIRO and Animal Health Australia (AHA) and between AHA and MLA were signed on 29 November 2010. A key outcome will be information to support the inclusion of FMD vaccination response policies in AUSVETPLAN and development of associated national standard operating procedures. This will ensure that the Australian livestock industries and community are better prepared to minimise the inevitable disruption that would be caused by an outbreak of FMD.

The work will involve pigs, sheep and cattle. The pig challenge experiments will be performed in Vietnam through a contract with NAVETCO, Vietnam's state-owned pharmaceutical company. One of the regional laboratories, Regional Animal Health Office No. 6, will be a sub-contractor since some of the laboratory work will be performed there. The sheep challenge experiments will be performed in South Africa in the BSL3 facility at the Onderstepoort Veterinary Institute, starting in the second year of the project. Cattle will be

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## Sending Biological Specimens Overseas

Laboratories are reminded that the Animal Health Committee (AHC) now requires that prior clearance is obtained from the relevant state Chief Veterinary Officer (CVO) before any samples from animals are sent overseas for testing for infectious and parasitic diseases. The CVO may require that a Materials Transfer Agreement is in place, ensuring that the collaborating laboratory destroys or returns to the sender the sample after testing is completed, and may also require evidence that the collaborating laboratory meets appropriate quality assurance standards before approving the export of the samples.



[www.scahls.org.au](http://www.scahls.org.au)

## Membership Changes

Sadly, some SCAHLS members, including Sarah Wylie (DAFWA), Les Gabor and Rod Reece (NSW DPI), Gary Horner (Qld DEEDI) and James Watson (AAHL), have recently left SCAHLS. We are all thankful for their valuable support over the years. We welcome new members Andrew Gregory (DAFWA), Adrian Philbey (NSW DPI), David Waltisbuhl (Qld DEEDI) and Sam McCullough (AAHL) to SCAHLS.

After providing SCAHLS with excellent secretariat service for more than two years, Tegan Honing-Wassenburg has taken on a new role within DAFF. Thanks from everyone Tegan. Meanwhile, I extend a warm welcome to Melanie Allan, who has recently joined DAFF from the private animal health sector and will take on the role of SCAHLS Executive Officer in October 2011.

Martyn Jeggo  
Chairman of SCAHLS

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challenged from the third year onwards at the new National Animal Health and Agri-food Quality Service (SENASA) facility in Argentina. Initial discussions and meetings with the relevant stakeholders have occurred. Since the laboratories in South Africa and Argentina may not have sufficient space to accommodate all testing following animal experimentation, this will be completed in collaboration with the FMD Regional Reference Laboratory at the National Institute of Animal Health laboratory in Pak Chong, Thailand.

Dr Nagendra Singanallur, who is an experienced animal scientist with expertise in various field and disease challenge works, has commenced duties as the project officer at AAHL recently. An additional research technician will also be appointed for this program in the near future.

## Tests Approved prior to the SCAHLS New Test Approval Process

Through the development of Australian and New Zealand Standard Diagnostic Procedures (ANZSDPs) and its new test approval process, SCAHLS has been seeking to improve the quality of the tests used in Australian and New Zealand laboratories. This work, together with National Association of Testing Authorities (NATA) accreditation, has led to greater confidence in test outcomes both nationally and internationally. However, there is a group of tests that have never had to meet this level of rigorous scrutiny. These include a number of tests listed in the former Australian Standard Diagnostic Tests (ASDTs) published in the 1980s, some of which are used for export testing. Indeed some of these tests are considered to be the 'gold standard' against which new tests are compared and validated.

Over the coming months, a number of laboratories will be asked to participate in comparison and reliability studies for many of these tests. The results of these studies will be used to obtain statistically valid verification data that will obviate the need for a full validation process for tests that have, in most cases, proved themselves as fit for purpose over the past two decades.

### Growth Media for *Mycobacterium avium* subsp. *paratuberculosis*

The BACTEC medium is currently the reference medium in Australia for culturing *Mycobacterium avium* subsp. *paratuberculosis* (Mptb). In February 2011, Becton Dickson (BD) announced that it would cease production of BACTEC medium in September 2011 and that this medium is likely to be unavailable after March 2012. There is no other medium validated for culture of all known strains of Mptb. Some commercial culture media, including BD's MGIT medium, do not support the growth of certain strains of Mptb including the S strain, which is common in Australia.

The Johne's Disease National Reference Laboratory at the Victorian Department of Primary Industries (DPI Victoria) and Richard Whittington's group at the University of Sydney have been trialling media to identify an alternative to BACTEC. However, one significant disadvantage of all new media currently under investigation is that, unlike BACTEC, they have no indirect read-out of growth. Development of a growth indicator system will take time and may not be technically feasible in the near future. This means that all cultures would need to be examined by polymerase chain reaction (PCR) and/or subculture to solid medium at approximately 4, 8 and 12 weeks.

DPI Victoria is currently undertaking the necessary reproducibility experiments for the University of Sydney media. This work will provide data to enable evaluation of the capacity of the new medium to support growth of Mptb from field samples. Preliminary results show that the new media seem to work just as well as BACTEC in both sheep and cattle at the University of Sydney laboratory. Experimental work for all media under investigation should be completed within the next few months and results will be circulated.

# AAVLD

The seventh annual meeting of the Australian Association of Veterinary Laboratory Diagnosticians (AAVLD) will be held at the Liz Kernohan Conference Centre, University of Sydney, Werombi Road, Camden, NSW, on 24 and 25 November 2011. There will be an opportunity during the meeting to undertake a tour of the new laboratories at the Elizabeth Macarthur Agricultural Institute. Details will be available from the AAVLD President, Dr Peter Kirkland (peter.kirkland@industry.nsw.gov.au).

## ANZSDP and New Test Approval

The ANZSDP for porcine circovirus infection has recently been approved by AHC and is now available on the SCAHLS website. ANZSDPs are consistent with the World Organisation for Animal Health (OIE) *Manual of Diagnostic Tests and Vaccines*, with additional requirements where special procedures and interpretation are necessary for Australian and New Zealand circumstances.

AHC has also approved the BioChek Avian Influenza Test Kit, which is an enzyme-linked immunosorbent assay (ELISA) based IgG antibody specific test suitable for diagnosis of type A avian influenza in domestic fowl (chickens). SCAHLS has recently completed the evaluation of the 3ABC FMD ELISA, which will be submitted to AHC for final approval.

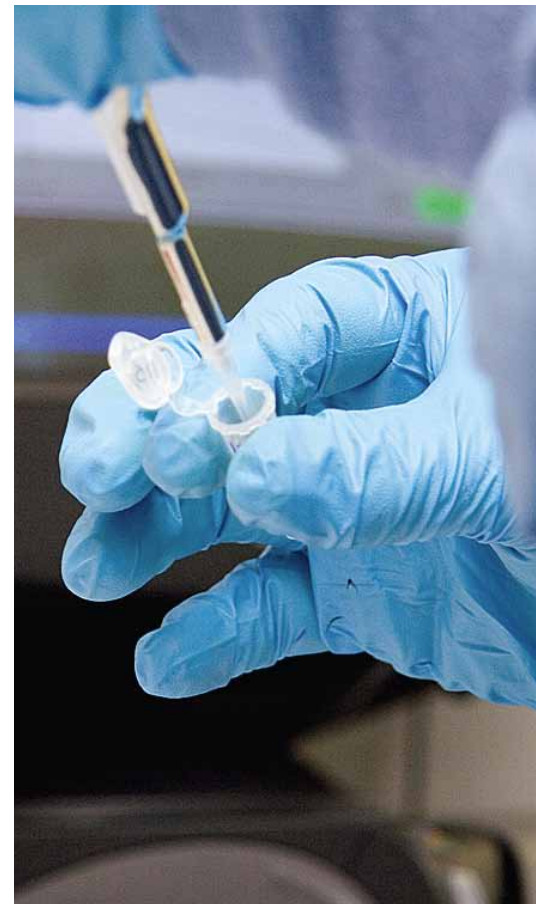


IMAGE COURTESY OF CSIRO

## LEADDR Update

The unique role of the LEADDR (Laboratories for Emergency Animal Disease Diagnosis and Response) network in providing test harmonisation has been emphasised during the past few months in the response to outbreaks of Hendra virus and equine flavivirus that have affected several states. The LEADDR network and individual disease working groups have met on several occasions to discuss a coordinated approach to testing and to provide technical support for individual laboratories.

In response to the situation with equine flaviviruses, a temporary working group was established to provide a laboratory case definition for flaviviral disease in horses and to share test methods. To gauge the degree of agreement in test results between laboratories, test panels for equine flavivirus have been distributed to participating laboratories with support from the



IMAGE COURTESY OF CSIRO

Australian Government Department of Agriculture, Fisheries and Forestry (DAFF).

Once again, the open communication and co-operation



IMAGE COURTESY OF CSIRO

between LEADDR members has been a key feature of the success of the network, particularly during these significant disease outbreaks.