

2018 Launching Meeting of OIE Twinning Project for Rabies  
between Anses-Nancy and AHRI, 16-19 Oct 2018

# Rabies Surveillance and Control in Singapore

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## ➤ **Agri-Food & Veterinary Authority (AVA) of Singapore**

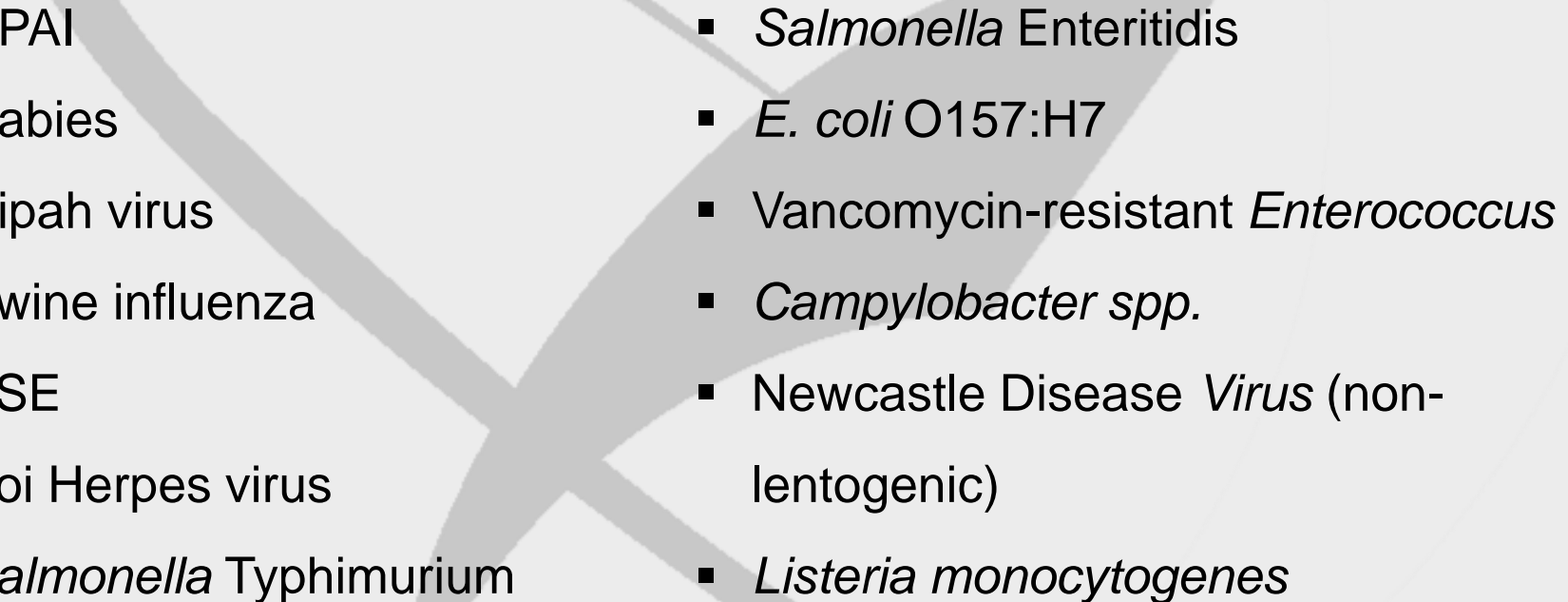
- Government Regulatory Agency
- Responsible for food supply, food safety, animal and plant health, agri-technology and animal welfare in Singapore
- National Animal Health Authority
- National Animal Health Laboratory

# Animal & Plant Health Centre

Agri-Food & Veterinary Authority



- **Animal Health Laboratory Department (AHL D)**
  - **National Laboratory for the diagnosis of animal diseases, international trade testing and quality control of animal vaccines**
    - ❑ Animal Health diagnostic laboratory
    - ❑ Accredited to ISO/IEC17025:2005 since 2006
    - ❑ Maintains own SPF chicken flock
    - ❑ Participates regularly in Inter-laboratory Proficiency (ILP) Quality Assurance Testing programs for aquatic animal health, bacteriology, veterinary pathology & virology tests.

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- A decorative horizontal bar at the top of the slide is composed of several colored segments: a long light green segment, a shorter lime green segment, a small orange segment, a long orange segment, a small blue segment, a medium blue segment, and a long dark blue segment. The background features a large, faint, grey silhouette of a bird in flight, possibly a swan or a similar waterfowl, with its wings spread wide.

- HPAI
- Rabies
- Nipah virus
- Swine influenza
- BSE
- Koi Herpes virus
- *Salmonella* Typhimurium
- *Salmonella* Enteritidis
- *E. coli* O157:H7
- Vancomycin-resistant *Enterococcus*
- *Campylobacter* spp.
- Newcastle Disease *Virus* (non-lentogenic)
- *Listeria monocytogenes*

- **Singapore has been free from Rabies since 1953**
- Rabies Contingency Management Plan in place
- Animal Quarantine
  - Changi Animal and Plant Quarantine Station (CAPQ)
  - Sembawang Animal Quarantine Station (SAQS)
- All animals, birds and their products coming through Changi International Airport undergo inspections at CAPQ
- SAQS provides quarantine for imported dogs, cats and small mammals
- All imported susceptible animals that die in quarantine required to be screened for Rabies infection

- **Quarantine Policy for Dogs and Cats' Importation (Jan 2010)**
  - Category A -- Countries traditionally free from rabies e.g. Australia, New Zealand.  
No quarantine needed if animals are clinically healthy on arrival
  - Category B -- Countries with negligible risk of rabies e.g. Japan, Hong Kong  
No quarantine needed with valid vaccination 1 month prior to export
  - Category C -- Countries with controlled risk, or low incidence of rabies e.g. Canada, Netherlands. Mandatory quarantine of minimum 10 Days
  - Category D -- Other countries, undetermined risk e.g. South Korea  
Mandatory quarantine of minimum 30 Days
- \*Based on the assessment of each exporting country's rabies status
- AVA requires all dogs and cats from Category B, C or D countries to have a rabies antibody titre test to be greater than 0.5IU/ml.

## ■ Local Dogs and Cats

- Licensing & Micro-chipping

For the purpose of rabies control, all dogs above the age of 3 months have to be licensed by AVA

- Vaccination

- I. As of 28 September 2017, voluntary Rabies vaccination for pet dogs/cats allowed in Singapore
- II. Vaccination Programme
  - Maintenance of rabies vaccine stockpile
  - Vaccination of identified high-risk areas: Annual Rabies vaccination and serosurveillance program for coastal fish farm dogs since 2015
- III. Capability building of private veterinarians and support staff



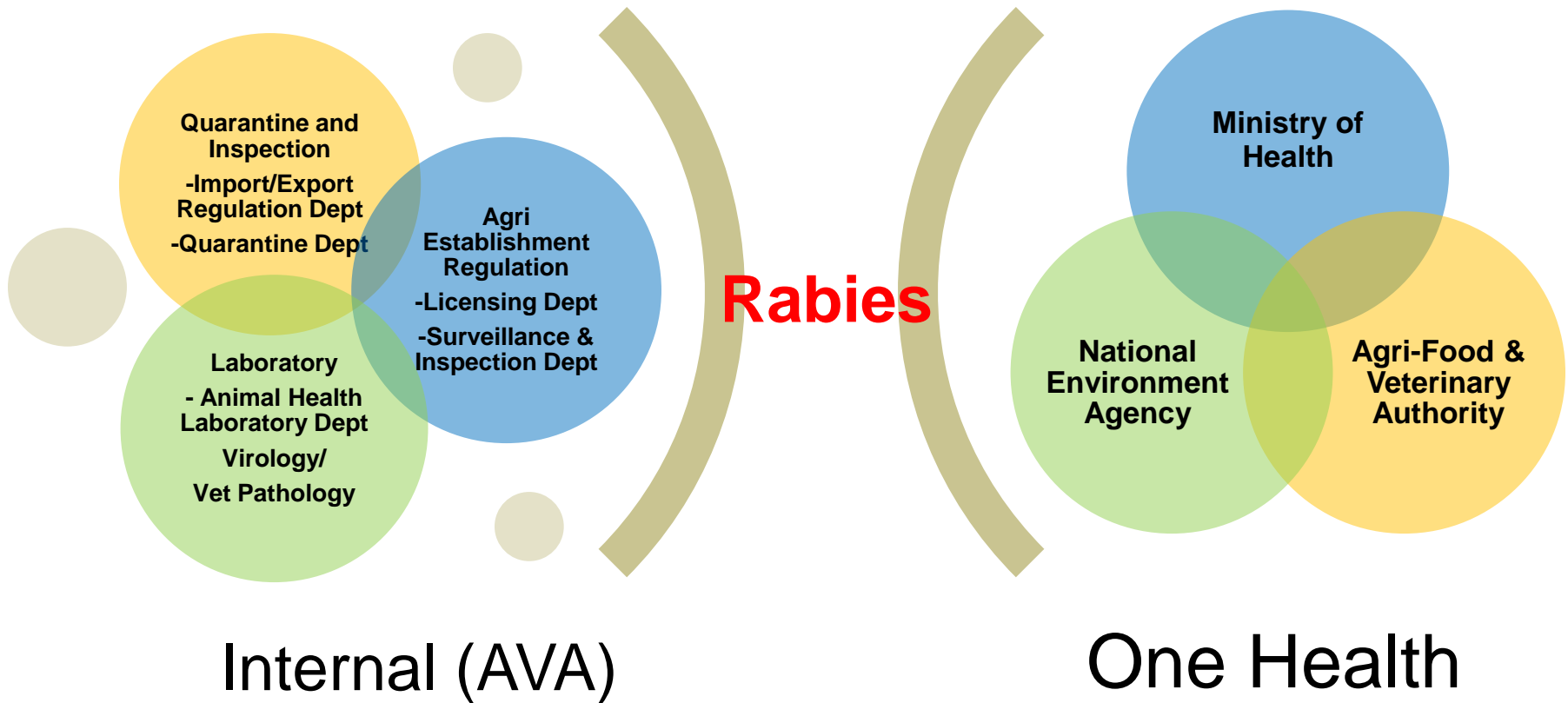
- **Requirement for Equine importation**

- The country has been free from rabies in the past 2 years

**OR**

(1) during the 6 months prior to export, the horse has not suffered from or been exposed to nor been in premises infected with rabies, **and**

(2) the horse has not been vaccinated against rabies **OR** was vaccinated against rabies using an approved vaccine not less than 30 days and not more than 12 months prior to export



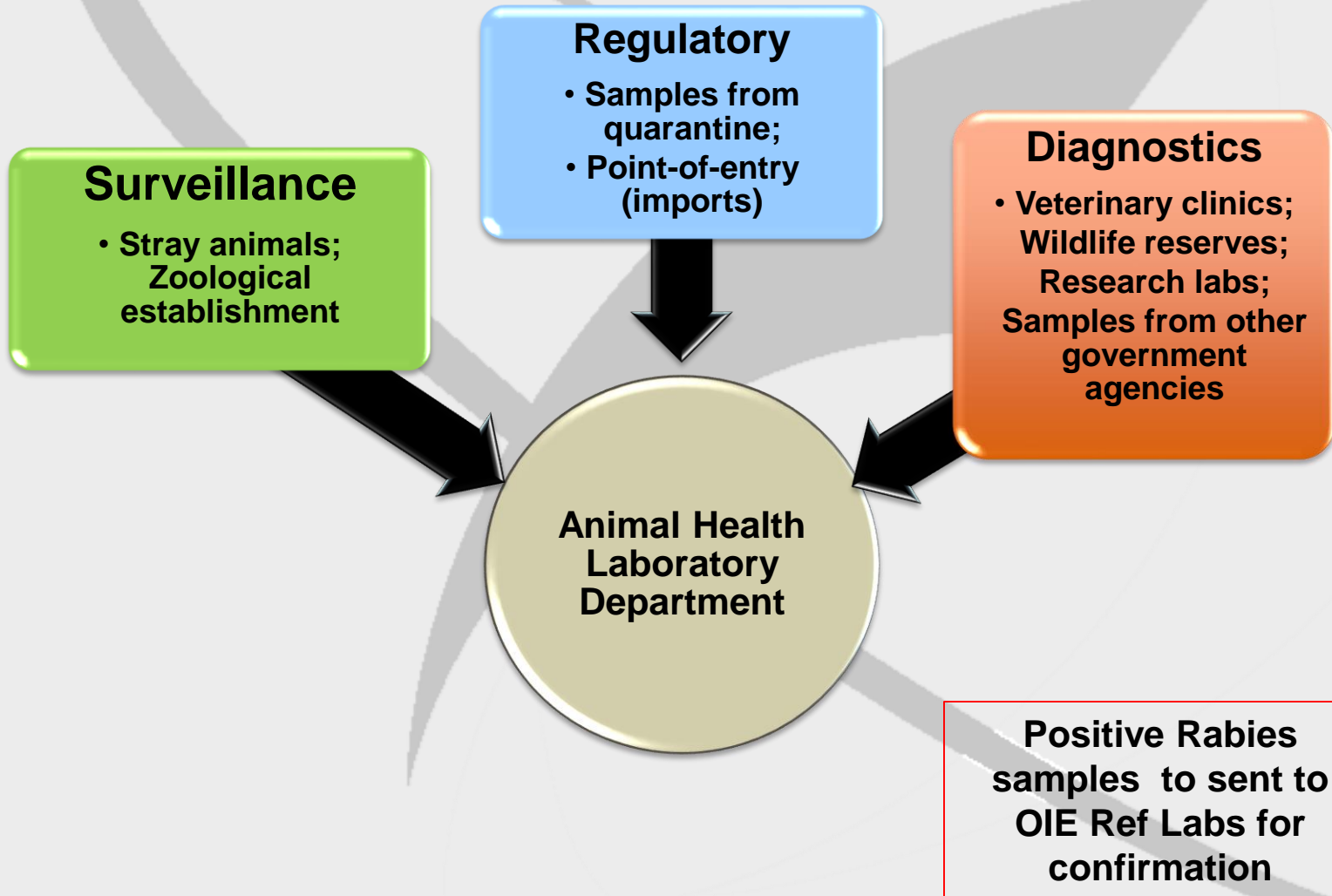
### **Contingency Management Plan**

- Activated for Rabies incident
- Stockpile of rabies vaccines
- One Health Collaboration

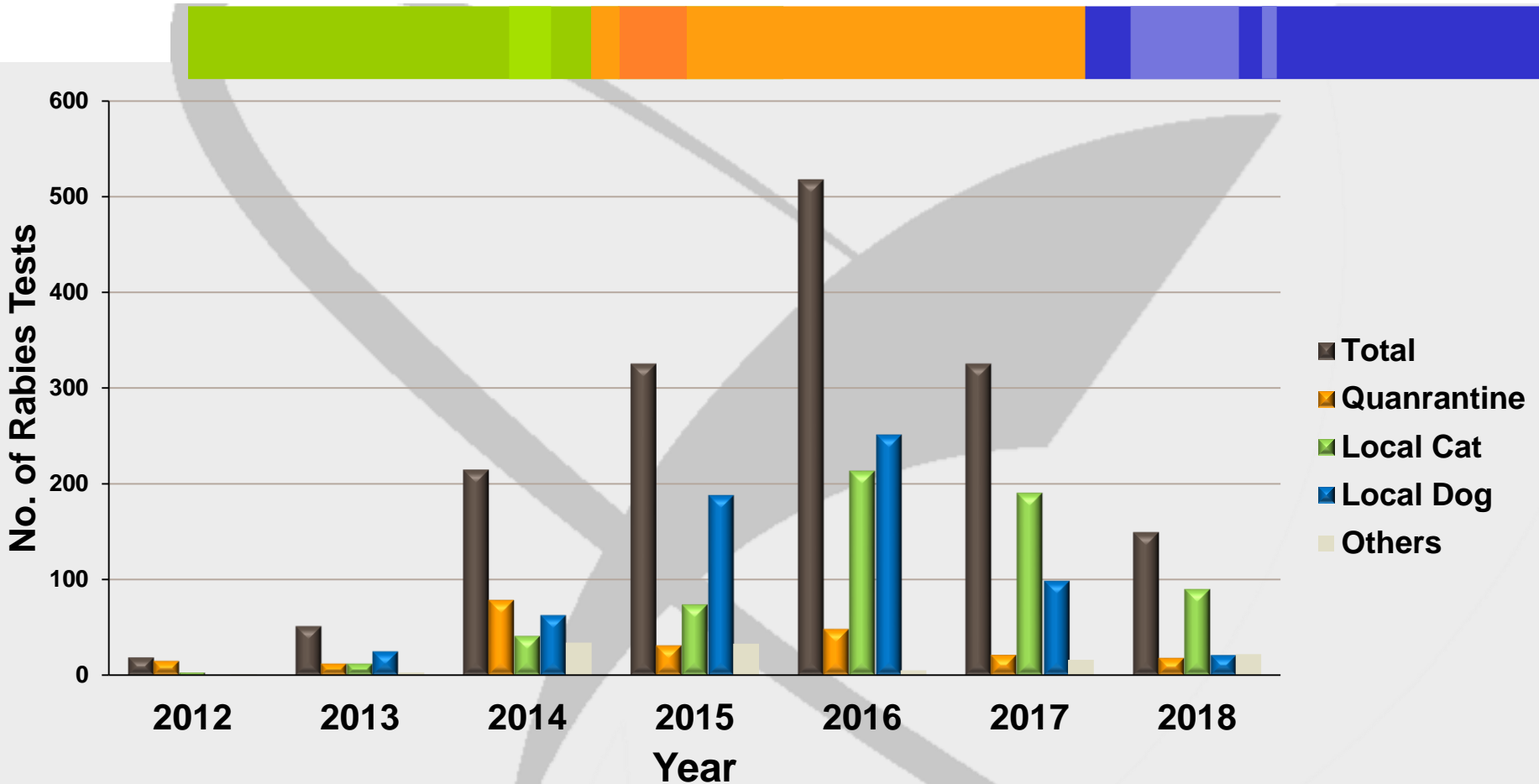
- **Animal Rabies Diagnosis at AHLD**

- Fluorescent Antibody Test
- PCR detection and sequencing
- Immunohistopathology
- Necropsy
- Histopathology
- Rabies antibody ELISA

*\* we do not conduct tests on human samples*



# Rabies Surveillance

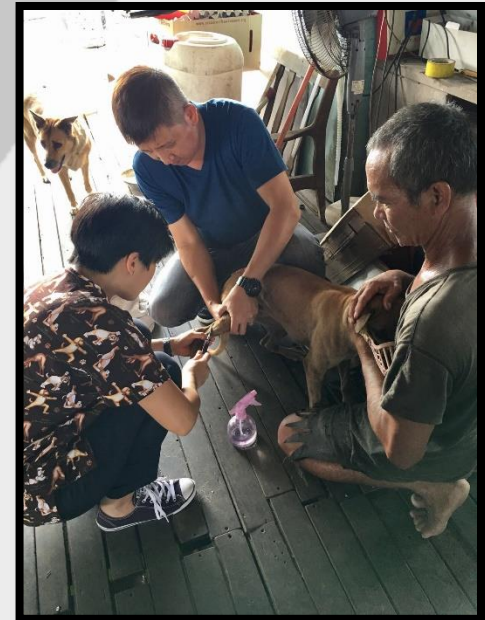


1) Local cats/dogs includes stray animals and samples submitted by SPCA (Society for the Prevention of Cruelty to Animals), pet clinics etc.

2) Others are animals other than cats and dogs. e.g. horse, sheep, guinea pig, wildlife animals etc.

- **Participation in proficiency testing program for Rabies (non-infectious panel)**
  - AAHL, Australia (2014) for Rabies FAT and PCR
  - Seek opportunity to participate in proficiency testing for Rabies (non-infectious panel) more frequently to assure the quality of the test
- Seek collaboration opportunity with neighboring countries on Rabies strain characterization

# Coastal Fish Farm Exercises





A close-up photograph of several light pink orchid flowers with darker pink centers, growing in a greenhouse. The background shows the metal frame and glass panels of the structure, with some greenery visible through the glass. The lighting is soft and natural.

**Thank You**

**Dendrodium AVA Singapore**