The Report of OIE Reference Laboratory for Swine Streptococcosis

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Introduction of OIE Reference Laboratory for Swine Streptococcosis

- OIE Reference Laboratory for Swine Streptococcosis was approved in June 2013.
- The construction of the laboratory started from early 2014 and completed in November 2014.
This laboratory was equipped with advanced experimental hardware and high-level platform for the research related to swine Streptococcosis
The development of methods for detecting *Streptococcus suis*

- *S. suis* is an important pathogen for pigs, and it is also considered as a zoonotic agent for humans
- More than 30 serotypes have been identified
• **Serotype 2 is the most virulent and prevalent, but the distribution of serotypes from clinical cases differs depending on the geographic location**

• Based on capsular polysaccharide locus, we developed 15 serotype-specific PCR to detect serotypes 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 14, 16, 19, 23, 25, and 1/2
Providing diagnostic service in China and ASEAN countries

• In 2014, the total number of test is 2042, samples from China and ASEAN countries

• In 2015, the total number of test is 193, samples from China

• In 2016, the total number of test is 126, samples from China
Training course of swine Streptococcosis control for the researchers from foreign countries

- **November 24-26, 2010, Nanning, China**
  
  13 students came from six countries including Thailand, the Philippines, and Laos

- **November 3-7, 2013, Nanning, China**
  
  13 students came from six countries including Malaysia, Bangladesh, and Maldives

- **November 24-25, 2015, Nanjing**
  
  7 students came from four countries including Vietnam and Pakistan
Challenges and proposals to technical advice

- In the OIE reference manual of *S. suis*, PCR was recommended for identifying and serotyping *S. suis* by targeting housekeeping gene *gdh* and serotype 2 specific gene *cps2*, respectively.

- More serotypes from clinical cases are present than those reported to date, especially for serotypes 7 and 9.
• It was reported that certain isolates that are \textit{gdh} positive were identified as non-\textit{S. suis} strains.

• Detecting gene \textit{recN} is more accurate than gene \textit{gdh} for distinguishing authentic \textit{S. suis} strains from \textit{S. suis}-like strains.
We suggest:

- Using *recN* to replace *gdh* as a new target gene for identifying *S. suis*

- Besides serotype 2, *serotypes 7 and 9* should be also detected for serotyping *S. suis*
Challenges to scientific training for personnel from OIE member countries

- The fund for providing scientific training for personnel from OIE member countries is very limited
Thank you!