# Vocabulary

For the foreseeable future

 As it is likely that SRID will remain the primary potency assay for inactivated influenza vaccines for the foreseeable future, efforts should be made to improve the assay, including:

1. Harmonisation of assay method and reagent availability.
2. Improvement of the reagent calibration process.

 2

To address some of the limitations of the SRID assay, alternative methods to determine vaccine potency should be developed and evaluated:

1. New assays should be low cost, not labour‐intensive, high throughput, high specificity, stability‐indicating, indicative of antigenic structure and vaccine effectiveness. Most of these are features of the SRID assay.
2. Development should include application of assays for newer vaccines, for example cell culture‐derived vaccines; recombinant vaccines; adjuvanted vaccines; virus‐like particles.
3. Validation of new assays could include bridging studies to SRID assays, animal studies and clinical trials.
4. The results are quantitative and will be obtained from the lecture of the 96-well plate by a spectrophotometer at an optic density of DO = 450 units.
5. The spectrometer calculates the value of the optic density based on Beer lambert law.
6. The systemic and mucosal antibody titers in the respective serum and mucus of Asian seabass were determined by ELISA. Flat-bottom microplate wells (Costar®, Corning Inc., USA) were coated with 100 μL/well of S. iniae and S. agalactiae whole-cell antigen (equivalent to ~108 CFU/ mL) in carbonate coating buffer at pH 9.6, and incubated overnight at 4 ◦C. The wells were washed three times with 1× PBS, containing 0.05% Tween-20 (Amresco, USA) (PBST). To evaluate appropriate dilution for ELISA assay, serum or mucus samples were pooled from three fish for each time course, and 2-fold serially diluted solutions were used. The suitable dilutions for ELISA analysis for serum and mucus were found to be 1:256 and 1:8, respectively. The serum and mucus samples from the remaining three fish of each time point were then individually diluted accordingly in PBST containing 0.2% skimmed milk (PBSTM) and incubated with the bacteria coated plates for 1 h at room temperature. After washing three times with PBST, anti-Asian seabass IgM secondary antibody [27] diluted with PBSTM (1: 50) was added and incubated for 1 h, followed by washing with PBST and adding commercial goat anti-mouse antibody horseradish peroxidase (HRP) conjugate (Thermo Fisher Scientific, USA) diluted in PBSTM (1: 3000) into each well for 1 h. After washing, 3, 3′, 5, 5′-tetramethylbenzidine (TMB) substrate (EMD Millipore Corp, USA) was added, and the wells incubated for 15 min with gentle shaking. The reaction was then stopped by adding 100 μL of 2 M H2SO4 into each well. A microplate reader was used to measure the absorbance at 450 nm [26].
7. Figure 2 Population snapshot of S. agalactiae constructed in eBURST. In addition to the 9 eBURST groups that are shown, 36 singletons were present in the database (last accessed 7 November 2012). Founders of major clonal complexes (ST1, ST17, ST19, all of which form part of eBURST group 1, and ST23, which is the founder of eBURST group 2) and sequence types (ST) identified in the current study are labelled. Italics indicate STs isolated from fish, bold italics indicate the ST from fish and a frog, and shaded labels indicate STs from sea mammals. All-haemolytic S. agalactiae isolates from fish belonged to a single branch of eBURST group 1, all seal isolates (n=6) belonged to eBURST group 2 and all non-haemolytic isolates belonged to two small eBURST groups that included ST260 and ST261.

\ac{fkv}, \ac{gbs},

\ac{gp}, \ac{s.},

\ac{mic}, \ac{(v/v)},

\ac{tsb}, \ac{hkv},

\ac{bhi}, \ac{cfu},

\ac{mic}, \ac{(v/v)},

\ac{s.agalac}, \ac{a.veranii}.

\ac {chitralada4}, \ac{bw}, \ac{wg},

\ac{tsa},