DCVMN PSPT Project
Technical Workshop 8
Thursday June 24th 2021

Attendees: Anissa Wari Murti (AWM), Apichai Supasanatorn (ASP), Arjen Sloots (AS), Arun Bhardwaj (AB),Deepak Mahajan (DM), Dewi Sulanjari (DS),Dini Hiayati (DH), Dionne David (DD), Elizabeth Ika Prawahju (EP),Gautam Sanyal (GSL), Gopal Singh (GSH), Irma Riyanti (IR), Muhammad Erdiansyah (ME), Pavel Mitrenga (PM), Pavlinka Stoyanova (PS), Pradip Das (PD), Rajinder Suri (RS), Sreenivasulu Reddy B (SR), Sunil Gairola (SG), Surender Reddy (SRR), Tim Schofield (TS), Wereyarmarst Jaroenkunathum (WJ), Zulfa Noerhidayati (ZN), Laura Viviani (LV), Sonia Pagliusi (SP),Sonia Villaseñor (SV), Sivashen Cunden (SC)
Apologies: Christina Von Hunolstein (CVH) Coenraad Hendriksen (CH), Jim Saylor (JS), Sivakumar Sakthivel (SS), Supaporn Phumiamorn (SPh), Sekar Thangaraj (ST) Ute Rosskopf (UR)

Welcome and AOB — AS

AS introduced agenda and short roll call of participants was requested.

1. PSPT Project Update — LV/SC/AS

Shipping

- Coating antigen has been shipped to all participants countries. 10 labs have successfully received the coating antigen in good condition with no reported drops in storage temperature or other issues that may affect coating antigen quality.
- 1 shipment of coating antigen incomplete due to pending MTA signature.

Data Collection Platform

- DCP has been validated by Steering Group and has now been deployed and is accessible by the participants. All participants have been sent login information in June 2021.
- DCVMN has asked all participants to complete before testing survey before the 10th of July.
- Post meeting note: Due to discussion during the 8th workshop DCVMN have now changed the deadline for the BEFORE testing survey to the **5th of JULY** so that any difficulties participants face can be addressed, and the results Excel can be modified accordingly.
- Proposed log/lab book for collection of relevant meta data under review by SG to be sent to participants early July after finalization.
- Tutorial video to use the PSPT results Excel spreadsheet now available on platform.
- Results spreadsheet to be finalized with potency calculation linking and statistical functions to be reviewed by TS – Early July dependent on level of modification required based on before testing survey results.

Getting ready for testing

- All SOPs have been finalized and sent to all participants.
- 3 participants have begun testing phase elements (mice immunization, sentinel program etc.)
- 1 participant has shared testing phase schedule with DCVMN commencing end of June.
- Other participants to inform DCVMN of start of testing phase and any foreseen delays.

NIIMBL Activity

- DCVMN has been invited by NIIMBL to present the key milestones and achievements of the PSPT project at virtual NIIMBL annual meeting July 14-16.
- LV thanked all participants for their participation, input, and dedication to the project which has allowed DCVMN to participate in this event.

Consortium comments

TS elaborated that while the results spreadsheet will be further updated there will be no need to update the training video given that the potency calculations (not captured in tutorial video) can be carried out automatically provided 2 conditions are met:

1. The concentration of the reference standards is kept consistent across labs (Before testing survey will inform this condition)
2. A maximum number of test preparations can be written into the spreadsheet. (Before testing survey will inform this condition)

DD stated that these conditions will be kept in mind while finalizing the results spreadsheet. LV stated that most of the participants will be using a regional standard (India) there maybe a few laboratories that will use other reference standards (e.g. WHO standard which Bulbio have confirmed will be used in their scheme).

2. Participants: Status of activities

- WJ presented the Thai NCL testing schedule and PSPT testing scheme using DTwP-HB-Hip vaccine commencing June 30th with immunization of mice. Thai NCL testing scheme will consist of FL1, FL2, FL3 and FL3-altered. Thai NCL will not be splitting FL2 into duplicate sublots (FL2A and FL2B) due to decision taken by internal ethics committee to minimize use of mice.

- SIIPL will be carrying out the project as specified in the protocol and testing scheme will consist of FL1, FL2A, FL2B, FL3 and FL3-altered via the 2-experiment approach. SIIPL will also be testing additional lots. SIIPL have screened sentinel mice for *B. para pertussis* etc. after immunization and a negative response was found. SIIPL have also performed all systems suitability testing.

- Bharat Biotech to begin testing in July and are looking for a vendor that can provide a certificate that the mice do not have any antibodies against *B. pertussis*, *B. parapertussis* or *B. bronchisceptica*.

- NCL Indonesia will be performing antibody screening of mice.

- Sanofi India will commence project activities from July 1st.

- Panacea Biotech will commence project activities from July 1st.

- Biofarma to still finalize the scheme and acquire reagents for the project.

Consortium comments

WJ presented a plan from the Thai NCL which excluded repeat testing of FL2 (labelled FL2A and FL2B). TS explained that statistically the FL2A and FL2B testing is significant to the project to understand the variability of the assay and enquired as to why this variable could not be accommodated. WJ explained that the routine KT testing could not be used for this project therefore the ethics committee found the use of additional animals to be unnecessary and therefore did not approve the duplicate test. TS and LV asked all members if they will face a similar limitation. No other participants pointed to having similar limitations. AS asked if the Thai NCL ethics committee can be reengaged to explain the need for duplicate testing.

Post meeting note: Thai NCL agreed to rededicate mice from FL1 to perform FL2B in the PSPT.

AS, LV are glad to see that SIIPL are moving smoothly ahead with the activities outlined in the SOPs and thank SIIPL for the update.

In regard to Bharat Biotech activities while the certificate is useful SG advises that the mice are retested prior to commencing immunization and subsequent testing. If it is not possible to perform the ELISA kit tests SG stated there are also culture methods to detect antibodies against *B. pertussis*, *B. parapertussis* or *B. bronchisceptica*.

3. Future Management of critical coating antigen

DCVMN is exploring 3 scenarios for the future management of the coating antigen material:

Scenario 1

BioLyo will store and manage the inventory of the coating antigen as per contract for 2 years and handle all delivery requests from labs seeking material. PHE-UK (source of *B. pertussis* bacteria strain) will be kept informed of distribution (research use only, which includes validation studies) due to copyright on parent strain. Participants who have already signed MTAs can in the future request material from BioLyo without additional MTAs etc. Delivery will be the only cost.

Scenario 2

DCVMN to donate the all material to NIBSC-UK. NIBSC will store and manage the inventory of the coating antigen as per contract to be decided (approx. 10 years or till depletion of available material). Delivery will be the only cost for interested parties.

Scenario 3

DCVMN to contact all known labs currently producing and testing (manufacturers, NCLs) wP vaccines and donate antigen to labs for potential use in the future. Approx. 20 laboratories. Delivery will be handled by DCVMN to these laboratories.

Consortium comments

LV asked participants for their opinions of which scenario would be of benefit after completion of the study. WJ commented that while normally reagents are acquired through NIBSC perhaps scenario 3 would be suitable if there is global interest and laboratories intend to move toward PSPT testing. AS enquired in scenario 1 what happens to the antigen after the storage period (2 years) by BioLyo. LV explained either the antigen would have to be distributed or another storage facility found. SP stated that perhaps the contract with BioLyo could be extended for 10 years, this option will require discussion with BioLyo. AS asked how PHE will be involved after the validation of the method. LV explained that this needs to be further explored as the commercialization of biological material derived from PHE parent material may be subject to royalties. This may be further discussed after completion of project. SG explained that in the case of scenario 2, NIBSC and PHE normal procedure of cataloguing reagents occurs after PHE/NIBSC validate the reagent either using the data generated from an external study or an independent validation.

GSL and SP also pointed that stability testing will be required if the coating antigen is retained by BioLyo or NIBSC, as pointed in scenario 1 and 2. DCVMN may not be able to fund the costs for stability testing for 10 years. SP suggests that a presentation stating the pros and cons of each scenario should be written for the next workshop for further discussion.

Manufacturers pointed that if the project is successful a validation study would be a next step to convince regulators therefore there will still be a need of antigen.

LV stated that a presentation stating the pros and cons of each scenario will be prepared for the next workshop for further discussion after following up with NIBSC and BioLyo to discuss the points of validation and stability testing.

5. Next steps

- All participants to complete before testing survey by July 5th
- Intravacc to finalize spreadsheet into final PSPT spreadsheet.
- DCMVN finalize the log/lab book.
- DCVMN to prepare presentation stating the pros and cons of each scenario for future coating antigen management.

Meeting closed at 13:45

Notes taken by SC.

Signed

A Sloots

Arjen Sloots

Co-chair of the PSPT SG