

March 26, 2010

Richard E. Hill, Jr.
Director
Center for Veterinary Biologics
1920 Dayton Ave.
P.O. Box 844
Ames, IA 50010

Dear Director Hill,

Thank you for your December 4, 2009, letter regarding clostridial testing protocols and CVB's commitment to reduce the use of animals for all product tests. We appreciate your response and were pleased to learn that the *Clostridium chauvoei* flagella-specific monoclonal antibody is available for use in a capture ELISA as described in Draft Supplemental Assay (SAM) 220 for potency testing of *C. chauvoei* bacterins. We have some additional questions regarding clostridial vaccine batch potency testing, as well as questions regarding batch potency testing and monoclonal antibody sources that have arisen from memos you have referenced.

SAM 220 and clostridial vaccines

In our October 30, 2009, letter, we asked if CVB could provide us with USDA's position on the use of immunochemical potency assays of vaccines for *C. chauvoei*, *C. haemolyticum*, *C. novyi*, *C. sordelli*, *C. botulinum*, and *C. perfringens*.

In your December 4 letter, you informed us that CVB is working on an ELISA-based potency test for *C. chauvoei* bacterins in Draft SAM 220, but that SAM 220 had not been released. SAM 200 still appears as the active method for *C. chauvoei* bacterin potency testing, and this method requires *in vivo* challenge using guinea pigs. Does CVB have a timeline within which it expects to replace SAM 200 with SAM 220? If possible, could CVB share the Draft SAM 220 with us?

While you mention in your December 4 letter that CVB's participation in the International Cooperation on Harmonisation of Technical Requirements for Registration of Veterinary Medicinal Products (VICH) is an indication that CVB and the other VICH members aim to reduce regulatory testing using animals in general, we can find no reference in VICH materials regarding efforts to specifically address the issue of replacing *in vivo* vaccine batch potency assays with immunochemical methods. We are aware, however, that the European Pharmacopoeia 6.0 presently allows the use of immunochemical methods for *C. novyi* and *C. perfringens* vaccine potency testing. As such, does CVB or VICH have a timeline within which it expects to develop and implement *in vitro* replacements for the *in vivo* potency assays currently in use for *C. haemolyticum*, *C. novyi*, *C. sordelli*, *C. botulinum*, and/or *C. perfringens*?



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Ascites-sourced monoclonal antibodies

Your letter references Veterinary Services (VS) memo 800.97 to describe the process of obtaining monoclonal antibodies from CVB. In part, this memo describes the following antibodies and antibody conjugates with reference to ascites:

Intended use category	Product
E	<i>Bovine viral diarrhea monoclonal antibody (Ascites)</i>
E	<i>Bovine RSV monoclonal antibody (Ascites)</i>
E	<i>Porcine parvovirus monoclonal antibody (Ascites)</i>
E	<i>Infectious bovine rhinotracheitis gD monoclonal antibody (Ascites)</i>
E	<i>Infectious bovine rhinotracheitis gB monoclonal antibody (Ascites)</i>
E	<i>Porcine rotavirus, group A, serotype 4, VP4 monoclonal antibody (Ascites)</i>
E	<i>Porcine rotavirus, group A, serotype 4, VP7 monoclonal antibody (Ascites)</i>
E	<i>Porcine rotavirus, group A, serotype 5, VP7 monoclonal antibody (Ascites)</i>
E	<i>Porcine rotavirus, group A, serotype 3, 4, 6 monoclonal antibody (Ascites)</i>
E	<i>Canine distemper monoclonal antibody (Ascites)</i>
C and E	<i>Feline leukemia monoclonal antibody (detection antibody) (Ascites and ELISA reagent)</i>
B	<i>Canine coronavirus monoclonal antibody (Ascites)</i>
E	<i>Bovine viral diarrhea type 2 monoclonal antibody (Ascites)</i>
Intended use category	Definition
B	For testing master seed, cell lines, and frozen primary cells that are to be expanded for production
C	For testing primary cells not expanded from frozen cells and for individual serial testing
D	For Standard Requirement tests of bulk or final container samples
E	For standardizing laboratory standards

It appears that these thirteen products are the only antibody products available for purchase from CVB that are produced using an ascites method in animals. Is this correct? If so, does CVB have a plan to replace the ascites method with *in vitro* bioreactor methods?

We also note that the intended uses described for these presumably ascites-sourced antibodies do not include category D, or “Standard Requirement tests of bulk or final container samples.” It would appear that the antibody products listed above are generally available for other applications involving the laboratory standardization and manufacturing changes. Does this imply that no batch potency testing protocol in use by CVB relies on the use of ascites-sourced monoclonal antibodies?

Similarly, are the 55 remaining test reagent monoclonal antibody preparations listed in VS memo 800.97 (but not appearing in the list above) specifically produced without the use of ascites? If

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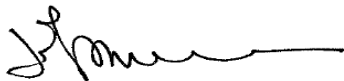
this is the case, are these monoclonal antibodies produced using high volume bioreactor technologies such as, for example, dialysis cartridge roller and/or hollow fiber systems?

Obtaining monoclonal antibodies from CVB

Finally, your December 4 letter references CVB Notice 02-09 as a further source for information on obtaining monoclonal antibodies from CVB. However, this notice, entitled "Issuance of additional RelPlot software and Supplemental Assay Method," seems to address a separate software issue. Is there an additional CVB Notice that we should consult for further discussion of monoclonal antibody production and/or ordering?

Please contact me with any information you may have regarding these vaccine testing and antibody issues. I can be reached by phone at (310) 437-8003, and by email at JeffreyB@peta.org, and I look forward to hearing from you on this important matter.

Sincerely,



Jeffrey Brown
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Regulatory Testing Division