

# Review of: "Seroprevalence of parvovirus infections from vaccinated and unvaccinated dogs of Andhra Pradesh"

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**Potential competing interests:** The author(s) declared that no potential competing interests exist.

## General Comments

This report describes the seroprevalence of canine Parvovirus (CPV) antibody titers in vaccinated and unvaccinated dogs in southeastern India. It presents convincing data about the extent of CPV infections in this district. A weakness of this paper is the failure, perhaps inability, to characterize how the vaccinated dogs were inoculated- i.e., when they were vaccinated, with what product(s), how many vaccinations, etc.- and how the investigators validated vaccination (via medical records, owners' comments, etc.). Similarly, it is unclear how the investigators validated that the 'unvaccinated dogs' were in fact unvaccinated. Ages of the dogs were collected in demographics but not correlated to antibody results. These deficiencies need to be corrected, as best as possible.

The investigators used two different serological assays and found significantly different results between the assays but did not adequately address reason for the disparity or which assay they felt was most accurate. The reasons for disparities need to be added to the Discussion. The Discussion section was largely a repeat of the data without substantial discussion of the results. Additionally, the Discussion contains new data (statistical analyses results) that should have been reported in the Results section.

## Specific Comments

Abstract, second sentence and last sentence-

These sentences do not make sense. Revise.

Abstract, 6<sup>th</sup> sentence-

insert the word 'antibodies' between "detect" and "56.1%".

Materials & Methods (M/M), Table 1-

The table is placed after the first paragraph of the M/M but not cited in the text. It should be amended (see below) and cited in Results.



#### M/M, Detection by Ind ELISA section-

The authors do not include how antibody titers (reported in the Results section) were calculated. This information needs to be included.

#### M/M, Test Sensitivity & Specificity section-

Because of the failure to characterize the vaccination methods (see above), one cannot be sure the “Screen positive” dogs were inappropriately vaccinated (y (i.e., with out of date or poorly stored vaccines), under vaccinated (inappropriate series or lack of boosters), etc. As such, the denominator “all vaccinated dogs” may not represent true positives. As a result, the sensitivity calculated in this report may not reflect accurately on the tests. Similarly, without better validation of the unvaccinated animals, the specificity may not reflect accurately on the assays. “Wanye (2016)” is not cited in the References.

#### Results-

This section repeats information already presented in the M/M section (i.e., the number of samples and cutoff values) and in Table 1. Redundancy should be eliminated or limited. The last sentence of the first paragraph should be verified with hard data, which could be included in Table 1. Geometric mean or median titers and ranges should be included in a table and indexed by age. The Comparative Assessment table (Table 2?) is not cited in the text. Statistical analyses results should be included in this section and not presented for the first time in the Discussion.

#### Discussion, 1<sup>st</sup> paragraph, 2<sup>nd</sup> & 3<sup>rd</sup> sentences-

It's unclear why “investigating presence of CPV antibodies” is “essential.” Please clarify. Is the 3<sup>rd</sup> sentence based on the authors' data, experience, or literature? Please clarify.

#### Discussion, 2<sup>nd</sup> paragraph, 2<sup>nd</sup> sentence-

We know vaccinated dogs were exposed to CPV infection- via the vaccine- but the way this sentence reads it suggests they were also naturally infected. Please revise. Sentence 3 needs citations. Sentences 4 & 5 repeat, verbatim, much the Results. Redundancy should be eliminated or restricted to direct discussion. Sentences 6, 7, 8, 10, 11, & 12 should be reported in the Results section. Sentence 9, as written, suggests all ELISA titers are “77% times”( % or times?) greater than HI titers. Revise.

#### Discussion, 3<sup>rd</sup>, 4<sup>th</sup> & 5<sup>th</sup> (last sentence) paragraphs-

This information needs to be related to the data from the present study.

#### Discussion, 5<sup>th</sup> paragraph-

The authors should compute titers in the Dekaeet *al.* paper to be similar to the ELISA titers in the present report. As written, readers cannot make a good comparison. The 3<sup>rd</sup> sentence is speculation and is out of place in this paragraph.



## Conclusion-

These sentences repeat the data and do not offer the authors' conclusions based on the data. This section needs to be revised or dropped.