Reviewer's report

Title: Genotypic and phenotypic analysis of diarrheagenic Escherichia coli strains isolated from Brazilian children living in rural communities

Version: 2 Date: 29 May 2013

Reviewer: Anthony Smith

Reviewer's report:

Diarrhea caused by Escherichia coli is a major health problem in all developing countries, including Brazil, so data on diarrheagenic E. coli (DEC) is very valuable. Six categories of DEC exist and often studies will be selective and only target certain categories of DEC. In the current study, the authors targeted all 6 categories of DEC - this makes the study valuable as all bases were covered, so well done to the authors for this.

Comments for the authors consideration:

Major points:

1. Methods, page 5: It is not clear how you indentified/found your patients – please elaborate on this. Did you find them because they reported to a clinic/hospital? If so, this needs to be mentioned.

2. Table 2, page 20 & lines 7-9, page 10: For EAEC detection, the DNA probe detected 99, while PCR detected 55. Any comments as to why the probe is more sensitive? Could it be that the probe (a full plasmid) includes more genes and results in more positive hits? Which would be the preferred method – PCR or probe?

3. Page 10, last 2 lines: “Recent studies conducted in large urban centers ............[6-9]”. Maybe need to elaborate more - highlight some urban data and compare data results for urban versus current rural. Need to briefly mention how DEC positivity values in the large urban centres compared to the very high values (63.1%) found in the current study. Were very high positivity values also found in the urban setting?

Minor points:


2. Page 6, lines 3-4: May want to mention the ethics approval reference number.

3. Page 9, line 18: Very few STEC (0.2%) were found - any explanation/hypothesis as to why so few STEC were found. What is the history of STEC identification in Brazil?

Level of interest: An article of importance in its field
Quality of written English: Acceptable

Statistical review: No, the manuscript does not need to be seen by a statistician.

Declaration of competing interests:
I declare that I have no competing interests.