Reviewer's report

Title: Impact of naturally occurring amino acid variations on the detection of HIV-1 p24 in diagnostic antigen tests

Version: 1 Date: 9 April 2015

Reviewer: david kelso

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Discretionary Revisions

It was unfortunate that the Alere Determine HIV-1/2 Ag/Ab Combo rapid test was not included in this study since it could become widely used in high-burden countries. It's poor performance reported in Vetter BN, et al. (2014) PloS One 9.10 (2014): e111552 was probably the reason for excluding it, but the findings in this study could lead to an improved assay.

Level of interest: An article of outstanding merit and interest 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:

At Northwestern University, I supervised development of a p24 antigen-only rapid test for early infant diagnosis that uses the Abbott antibodies. It is being commercialized by the non-profit Northwestern Global Health Foundation, where I am a director.