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Letter to the editor

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Dear Editor,

We would like to share ideas on a paper published in EMHJ Volume 30 No 1 of January 2024, titled, “Challenges and epidemiological implications of the first outbreak of dengue and chikungunya in Sudan” (1). The goal of the project was to develop a quantitative one-step RT-qPCR assay that would be economical, reproducible and sensitive enough to identify dengue (DENV), zika (ZIKV), and chikungunya (CHIKV) viruses in a variety of cell substrates. When identifying and measuring the viruses in different cell lines, the DNA intercalating green

dye-based RT-qPCR assay showed excellent specificity, sensitivity and repeatability. It also targeted specific genes of each virus.

The assay’s repeatability, sensitivity and specificity for clinical samples were not discussed in the study. Although it was mentioned, the assay’s cost-effectiveness was not fully assessed considering other available techniques. The possible restrictions or difficulties encountered throughout the assay design and evaluation process were not addressed in the study.

We recommend that the authors carry out additional validation studies using clinical samples to evaluate how effective the assay would be in identifying DENV, ZIKV and CHIKV in sick people. To ascertain whether the test can be used widely, particularly in low-income countries, it would be intriguing to compare its cost-effectiveness to other detection techniques. We recommend investigating possible improvements or changes to the test to enhance its effectiveness and precision in identifying and measuring the viruses under different conditions.

Reference

1. Aljaily SM, Hamed IAY, Mustafa KS, Ishag OSB, Musa EAE, Ahmed AK, Ibrahim EMA, Azrag RS. Challenges and epidemiological implications of the first outbreak of dengue and chikungunya in Sudan. East Mediterr Health J. 2024;30(1):53-59.

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