# Article information:

An antiviral drug screening system for enterovirus 71 based on an improved plaque assay: A potential high-throughput method - PubMed
<https://pubmed.ncbi.nlm.nih.gov/30900754/>

# Article summary:

1. An improved plaque assay based on an EV-A71/RD model was developed for enterovirus 71 (EV-A71) that exhibited rapid formation of plaques with high repeatability and consistency.

2. This modified method was used to establish a convenient system using 96-well plates for screening anti-EV-A71 drugs from a 130-compound library containing multiple types of inhibitors.

3. Nine candidate effective compounds for EV-A71 were screened out, and among them, nobiletin (flavonoid) was found to be a novel effective compound at the concentration of 10 μM.

# Article rating:

Appears moderately imbalanced: The article provides some useful information, but is missing several important points or pieces of evidence that would be required to present the discussed topics in a balanced and reliable way. You are encouraged to seek a more balanced perspective on the presented issues by exploring the provided research topics and looking at different information sources.

# Article analysis:

The article titled "An antiviral drug screening system for enterovirus 71 based on an improved plaque assay: A potential high-throughput method" presents a modified plaque assay method for screening anti-enterovirus 71 (EV-A71) drugs. The authors claim that this improved method based on an EV-A71/RD model proved to be a potential high-throughput method in screening novel antiviral drugs for EV-A71. However, the article has some limitations and potential biases.

One of the limitations of the article is that it only focuses on one virus, EV-A71, and does not explore the applicability of the modified plaque assay method to other viruses. Additionally, the article does not provide enough information about the compounds used in the drug library or their mechanisms of action. This lack of information makes it difficult to assess the validity and generalizability of the findings.

Another limitation is that the article does not discuss any potential risks associated with using nobiletin as an effective compound against EV-A71. While nobiletin is a flavonoid found in citrus fruits and has been shown to have various health benefits, including anti-inflammatory and anticancer properties, its safety and efficacy as an antiviral drug need further investigation.

Furthermore, the article does not present any counterarguments or alternative perspectives on using plaque assays for antiviral drug screening. It would be helpful to compare this method with other commonly used methods such as cytopathic effect reduction assays or luciferase-based reporter assays.

Overall, while this article presents a potentially useful modified plaque assay method for screening anti-EV-A71 drugs, it has some limitations and potential biases that need to be addressed. Further research is needed to validate these findings and explore their applicability to other viruses.

# Topics for further research:

* Mechanisms of action of antiviral compounds used in drug libraries
* Safety and efficacy of nobiletin as an antiviral drug
* Comparison of plaque assays with other antiviral drug screening methods
* Applicability of modified plaque assay method to other viruses
* Limitations of using plaque assays for antiviral drug screening
* Alternative perspectives on antiviral drug screening methods

# Report location:

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