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**Retraction Note: Screening and identification of bioactive compounds from citrus against non-structural protein 3 protease of hepatitis C virus genotype 3a by fluorescence resonance energy transfer assay and mass spectrometry**

Khan M. Retraction note

Mahim Khan, Waqar Rauf, Fazal-e- Habib, Moazur Rahman, Mazhar Iqbal

## Abstract

Retraction note: Khan M, Rauf W, Habib F, Rahman M, Iqbal M. Screening and identification of bioactive compounds from citrus against non-structural protein 3 protease of hepatitis C virus genotype 3a by fluorescence resonance energy transfer assay and mass spectrometry. *World J Hepatol* 2020; 12(11): 976-992 PMID: 33312423 DOI: <https://dx.doi.org/10.4254/wjh.v12.i11.976>. The online version of the original article can be found at <https://www.wjgnet.com/1948-5182/full/v12/i11/976.htm>

**Key Words:** Non-structural protein 3; Hepatitis C virus; Genotype 3a; Fluorescence resonance energy transfer

Khan M, Rauf W, Habib FE, Rahman M, Iqbal M. Retraction Note: Screening and identification of bioactive compounds from citrus against non-structural protein 3 protease of hepatitis C virus genotype 3a by fluorescence resonance energy transfer assay and mass spectrometry. *World J Hepatol* 2022; In press

1

**Core Tip:** We have decided to retract the above article for further consideration due to some misunderstandings in communication.

## TO THE EDITOR

In this manuscript, actually our study focus was to develop fluorescence resonance energy transfer (FRET) assay through expression of non-structural protein 3/4a (NS3/4A) protease of HCV genotype 3a, followed by the evaluation of extract and targeted pure natural products. However, we mistakenly used the expression vector that contains co-factor NS4A from genotype 1a. But whole story was built and described on the use of NS4A sequence/expression vector from the genotype 3a. The amino acid sequences of NS4A of the genotype 1a (KKGSVVIVGRIVLSGK) is significantly different from the genotype 3a (KKGCVVIVGHIELGK) that lead to the variation in the activity of NS3/4A protease [1].

We checked NS3/4A activity with co-factors from both genotypes (1a and 3a) and found a clear variation in the proteolytic activity of NS3 protease when fused to its respective co-factor NS4A. As mentioned earlier, in the published manuscript, by mistake we supplemented the full-length NS3 and NS4A-fused NS3 protease with a peptide derived from the NS4A of a genotype 1a virus that led to wrong interpretation and conclusion. Now we found that NS4A of a genotype 3a virus is really compatible with NS3 protease (3a) and exhibited much higher protease activity than the NS4A of a genotype 1a virus. Subsequently, this led to difference in the inhibitory concentration values of inhibitors (extracts and natural products) screened through the FRET assay. This significant variation in the activity assay has altered the downstream inhibitory activities of extracts and natural products. Regrettably, this situation has forced us to retract our paper to conduct more experimentation and make the major correction in data, before we can consider its rewriting and publication.

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