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Role of hemagglutinin esterase in replication of SARS-CoV-2

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Dear editor, we read with interest a published review article that focused on role of TLR4 as a therapeutic target for SARS-CoV-2 [1]. In this review, authors considered the hemagglutinin esterase (HE) protein as one of SARS-CoV-2 protein; in addition, they reported HE like 4a/b and 3a/b proteins has an important role in replication and genome maintenance of SARS-CoV-2 [1].

Since SARS-CoV-2 like SARS-CoV [2] as betacoronaviruses lacks HE gene in its genome, HE cannot be encoded by SARS-CoV-2 [3,4]; however, some betacoronaviruses's genome such as HKU1-CoV and OC43-CoV and bovine coronavirus contain hemagglutinin esterase gene. Thus they can encode HE protein [5].

This can lead to misunderstandings about the SARS-CoV-2 proteins and also design of drugs against the SARS-CoV-2.

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Declaration of interest

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