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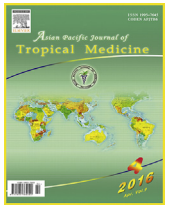

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Determination of ligand cluster and binding site within VP40 of Ebola virus: Clue for drug development

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Dear Editor,

Ebola virus infection is the present public health threat that posed the trend of worldwide pandemic [1]. At present, there is still no effective drug and vaccine for treatment of Ebola virus infection. An important basic knowledge for further Ebola drug and vaccine development is the ligand system within the viral molecule. For the Ebola virus, the study of its ligand can give the basic require knowledge on this new virus [2]. Focusing on the Ebola viral molecule, VP40 is mentioned as a possible drug and vaccine target [3]. Stahelin noted that "a number of studies have demonstrated specific deletions or mutations of VP40 to abrogate viral egress but to date pharmacological inhibition of VP40 has not been demonstrated [3]." To identify the ligand within the VP40 molecule can be the clue for further specific drug acting on VP40 search. In this study, the author hereby determines ligand cluster and binding site within VP40 of Ebola virus. The standard bioinformatics technique, structural homology assessment, was used for searching [4]. According to this study, the ligand cluster and binding site within VP35, VP40 of Ebola virus is identified. The ligand cluster with MAMMOTH score equal to 8.1 was identified and there were 3 identified binding sites (position 208, 216, 249) (Figure 1). The identified ligand cluster and binding site from this preliminary report can be used as information for further development of antiviral drug and vaccine to combat Ebola virus infection.

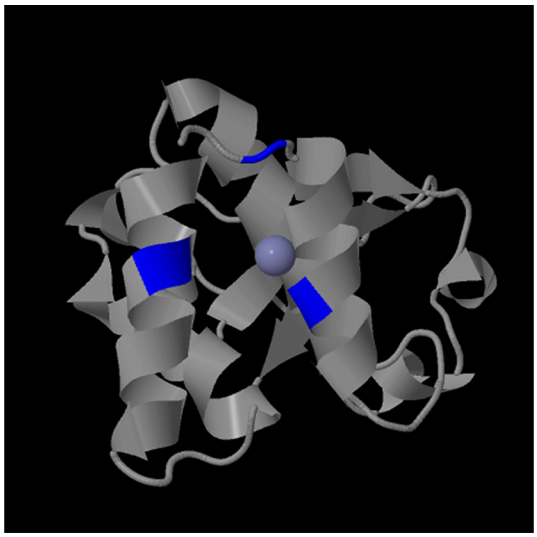

Figure 1. Identified ligands.

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