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Ramachandran plots of envelope glycoprotein GP2 from Ebola virus

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To the editor,

Dear editor, the study of the protein of any new emerging pathogen is an important step in finding of new drugs. For the present emerging Ebola virus 2014 infection, there are only a few information on its protein. An important basic study on any protein is to find the Ramachandran plot. Basically, Ramachandran plot is a basic plotting to represent the aspect of potential energy surface, which was examined as a function of the ϕ/ψ dihedral[1-3]. The plot can be further referenced for structural and pharmacophoric features[1]. Here, the authors studied the envelope glycoprotein GP2 from Ebola virus (crystal structure number 2EBO) and perform plotting for Ramachandran plots. The online investigation tool proposed by Jamie Al-Nasir (<http://personal.rhul.ac.uk>) was used for manipulation and plotting of the Ramachandran plot. According to the analysis, the finalized Ramachandran plot is shown in Figure 1. From the plot, it can be seen that there are few portions within the plot that is well contoured representing the stable and conformed protein structure. This means that the molecule of envelope glycoprotein GP2 from Ebola virus has many portions that are labile protein part indicating risk for variation, mutating or deformity. Of interest, the stable part of the envelope glycoprotein GP2 from Ebola virus is previously mentioned for its similarity to the envelope glycoproteinS of HIV and influenza[4]. The stable portion is also mentioned to the infectivity and cell invasion process of the virus[4].

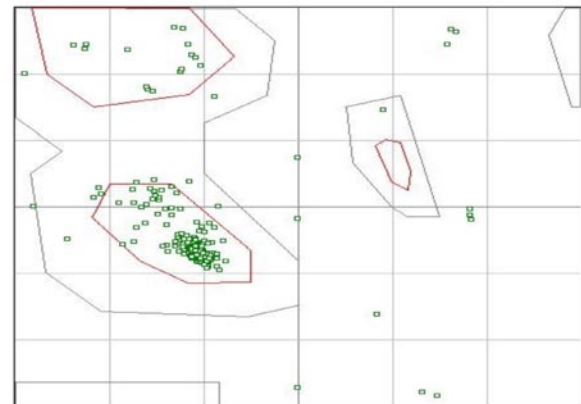


Figure 1. Ramachandran plots of envelope glycoprotein GP2 from Ebola virus.

Conflict of interest statement

We declare that we have no conflict of interest.

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