Abstract

BanLec is a mannose binding lectin derived from *Musa acuminata* (banana). It is known to have drug potential against HIV and current studies are working on its efficacy against AIDS. In this study, using *in silico* methods, the binding efficiency of BanLec against HIV, HCV, Dengue virus, Zaire Ebola virus and SARS Corona virus has been tested of which HIV, HCV and Ebola virus have positively shown interactions with BanLec. Furthermore, mutational analysis using bioinformatics tools show interesting results especially in case of Hepatitis C virus. Replacing BanLec residue Phenylalanine-18 with Histidine has a significantly high drug potential against HCV. On the other hand, mutation of BanLec residue Phenylalanine-131 to Histidine has been observed to cause considerable reduction in total interaction with HIV as well as HCV.