

SE-DP-003

Function of nucleic acid binding DENV host factors

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To unravel the function of nucleic acid binding DENV host factors (DVHFs). A major goal of our previous work (genome-scale screens) was to identify DVHFs that interact with DENV RNAs (Sessions et al., 2009). The study of these factors, we posit, would be an appropriate contribution given our expertise in RNA transactions. In the original application we proposed to focus on five DVHFs predicted to be nucleic acid interacting proteins (ZBTB41, CNOT2, FLJ20254, EXDL2, and GSX1). Preliminary studies described below and the interest in identifying potential druggable targets with broad-spectrum impact (as enunciated in the NIAID Strategic Plan for Biodefense Research) we decided to expand the aim to look for host factors that would also be required by the distantly related yellow fever virus (YFV).

At this time there are no approved specific therapies to deal with flaviviral infections. The work proposed here will identify potential druggable targets with pan-flavi activity.