

Table S4 - Duration of viremia and evolutionary rates of YFV,ZIKV and DENV

| Virus | Viremia duration | Descriptions in CDC (website) | Evolutionion rate | Reference |
|--------------|-------------------------|---|--|------------------|
| YFV | 3 days | approximately 3 days (https://www.cdc.gov/yellowfever/) | $\sim 4.2 \times 10^{-4}$ | ref. 10 |
| ZIKV | 4-7 days | a few days to a week (https://www.cdc.gov/zika/) highest in the first 3 or 4 days after onset of fever and then last for the next few days | $0.98 \text{ to } 1.06 \times 10^{-3}$ | ref. 6 |
| DENV | 3-7 days | (https://www.cdc.gov/dengue/) | $7.77 \text{ to } 9.85 \times 10^{-4}$ | |
| DENV-1 | - | - | 7.773×10^{-4} | ref. 25 |
| DENV-2 | - | - | 8.600×10^{-4} | |
| DENV-3 | - | - | 9.851×10^{-4} | |
| DENV-4 | - | - | 9.712×10^{-4} | |