Article
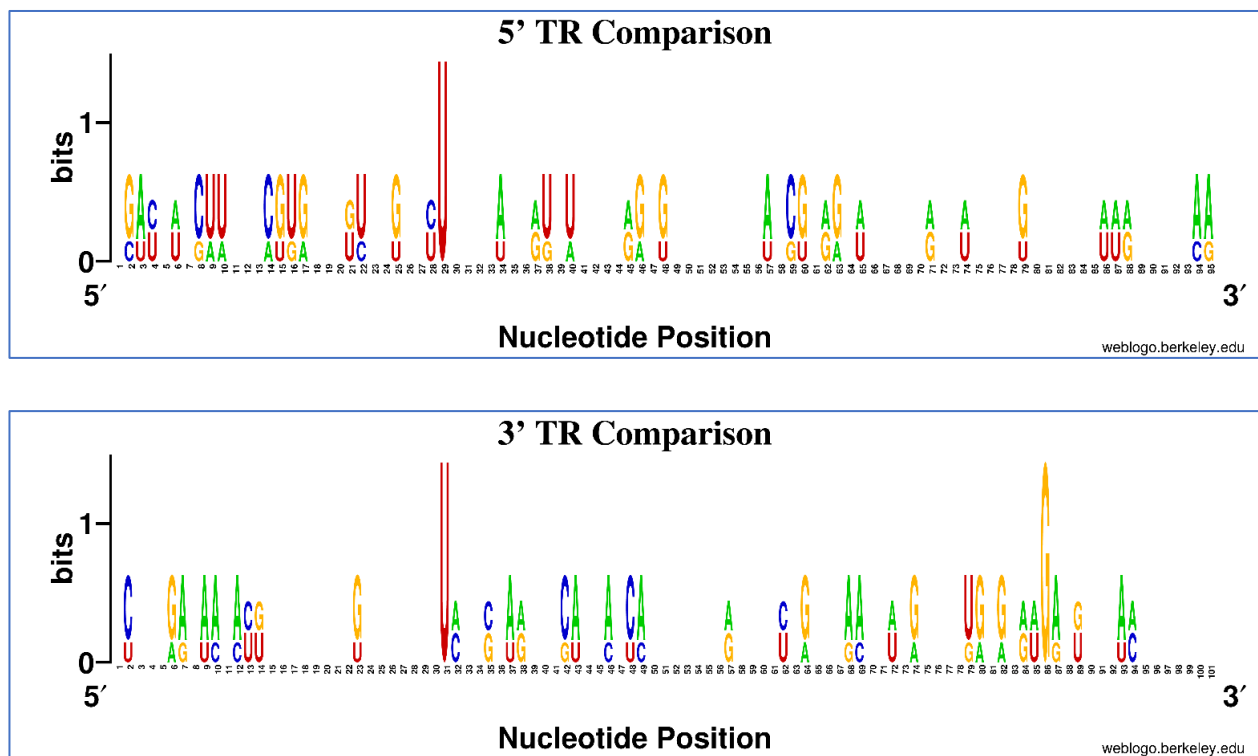
Nanoscale Structure Determination of Murray Valley Encephalitis and Powassan Virus Non-coding RNAs

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Supplementary Information

Supplementary Figure 1: Sequence alignment of 5' (top panel, first 95 nucleotides) and 3' (bottom panel, last 101 nucleotides) TRs of Powassan, Murray valley encephalitis, dengue, and West Nile viruses. The sequences used for alignment are presented below. The alignment was performed using WEBLOGO (https://weblogo.berkeley.edu/logo.cgi).

>PowV 5'TR
AGAUUUUCUUGCACGUGUGUGCGGGUGCUUUAGUCAGUGUCCGCAGCGUUC
UGUUGAACGUGAGUGUGUUGAGAAAAGACAGCUUAGGAGAACAAGAGCU

>MVEV 5'TR
CCUGGGAAAAGACUAGGAGAUCUUCUGCUCUAUUCCAACAUCAGUCACAAG
GCACCGAGCGCCGAACACUGUGACUGAUGGGGGGAGAAGACCACAGGAUCU

>DENV 5'TR
GCUUAACGUAGUGCUGACAGUUUUUUAUUAGAGAGCAGAUCUCUGAUGAAC
AACCAACGGAAGAAGACGGGAAAACCGUCUAUCAAUAUGCUGAAACGCGU

>WENV 5'TR
UGACAAACUUAGUAGUGUUUGUGAGGAUUAACAACAAUUAACACAGUGCG
AGCUGUUUCUUAGCACGAAGAUCUCGAUGUCUAAGAAACCAGGAGGGCCCG

3′TR comparison (First 101 nt)

>PowV 3'TR
CCCCCAGGAAACUGGGGGGGGCGGUUCUUGUUCUCCCUGAGCCACCACCAUCC
AGGCACAGAUAGCCUGACAAGGAGAUGGUGUGUGACUCGGAAAAACACC
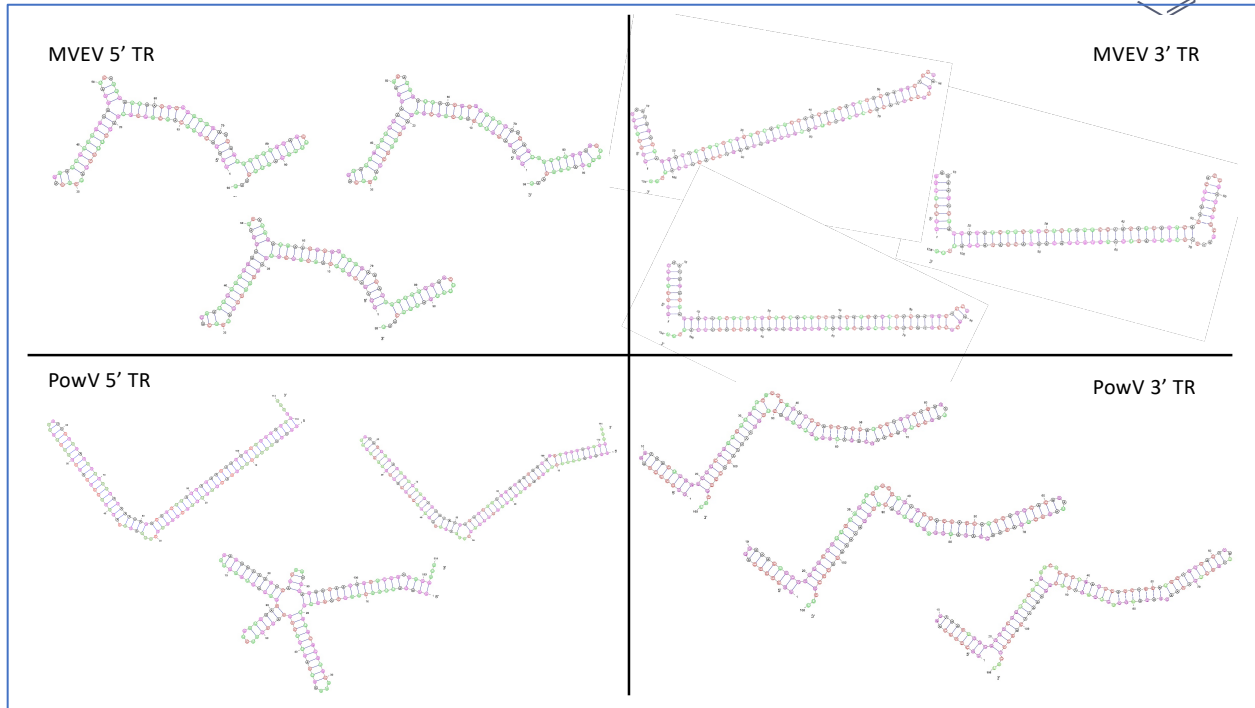
>MVEV 3'TR
CCUGGGAAAAGACUAGGAGAUCUUCUGCUCUAUUCCAACAUCAGUCACAAG
GCACCGAGCGCCGAACACUGUGACUGAUGGGGGGAGAAGACCACAGGAUCU

>DENV 3'TR
UCUUGGACUAUAUGCCUUCAAUGAAGAGGUUCAGGAAGGAAGAGGAGUCGG
AGGGGGCCAUUUGGUAAACGUAGGAAGUGAAAAGAGGCUAACUGUCAGG

>WENV 3'TR
AUGAAGACACAACUUUAGUUGAGGACACAGUACUGUAAAUACUUUAUCAA
UUGUAAAUAGACAAUAUAAGCAUGUAUAUAGGUAUGGGUUUAUAGUGGCA
U

MVEV 5' TR

MVEV 3' TR

PowV 5' TR

PowV 3' TR

Supplementary Figure 2: The lowest energy structures of MVEV and PowV 5' and 3' terminal regions are presented in Figure 1. This figure illustrates the next three lowest energy structures for each RNA structure.