Article DOI: https://doi.org/10.3201/eid2410.180161

Human Pegivirus in Patients with Encephalitis of Unclear Etiology, Poland

Technical Appendix

```
Patient 1 155
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
S1 (54433) CACCTTGGTA GCCACTATAG GTGGGTCTTA AGAGAAGGTT AAGATTCCTC TTGTGCCTGC GGCGAGACCG CGCACGGTCC ACAGGTGTTG GCCCTACCGG TGTGAATAAG GGCCCGACGT
S2 (6310)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
S3 (1040)  .......... .......... .......... .......... .......... .......... .......... .........T .......... .......... .......... .......... 
C1 (31166) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C2 (9595)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C3 (5524)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......G.. .......... 
C4 (4958)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C5 (2640)  .......... .......... .........C.... .......... .......... .......... .......... .......... .......... .......... .......... 
C6 (2405)  .......... .......... .......... .......... .......... .......... .......... .......... G......... .......... .......... .......... 
C7 (1380)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 

S1 (54433) CAGGCTCGTC GTTAAACCGA GCCCGTCACC CACCTGGGCT AACGACGCCC ACGTACGGTC CACGTCGCCC TTCAATGTCT CTCTTGACCA ATAGGTTTAT CCGGCGAGTT GACAAGGACC
S2 (6310)  .......... .......... ......T... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
S3 (1040)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C1 (31166) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C2 (9595)  .......... .......... ......T... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C3 (5524)  .......... .......G.. .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C4 (4958)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .G........ 
C5 (2640)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C6 (2405)  .......... .......... ......T... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C7 (1380)  .......... .......... .........T .......... .......... .......... .......... .......... .......... .......... .......... .......... 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
S1 (54433) AGTGGGGGCC GGGGGTCATG GGGATGGACC CCAGACCCTG CCCTTCCCGG TGGGCCGGGA AÅ 456 ΔG (kcal/mol)
S2 (6310)  .......... .......... .......... .......... .......... .......... .. -76.0
S3 (1040)  .......... .......... .......... .......... .......... .......... .. -76.0
C1 (31166) .......... .......... .......... .......... .......... .......... .. -76.0
C2 (9595)  .......... .......... .......... .......... .......... .......... .. -76.0
C3 (5524)  .......... .......... .......... .......... .......... .......... .. -76.1
C4 (4958)  .......... .......... .......... .......... .......... .......... .. -76.0
C5 (2640)  .......... .......... .......... .......... .......... .......... .. -76.0
C6 (2405)  .......... .......... .......... .......... .......... .......... .. -76.0
C7 (1380)  .......... .......... .......... .......... .......... .......... .. -73.0

Patient 2 155
S1 (38312) CACCTTGGTA GCCACTATAG GTGGGTCTTA AGAGAAGGTT AAGATTCCTC TTGTGCCTGC GGCGAGACCG CGCACGGTCC ACAGGTGTTG GCCCTACCGG TGAGAATAAG GGCCCGACAT
S2 (7338)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
S3 (3425)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C1 (89296) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C2 (17292) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .....A.... 
C3 (2473)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .....A.... 

S1 (38312) CAGGCATGTC GTTAAACCGA GCCCGTTACC CGCCTGGGCT AACGACGCCC ACGTACGGTC CACGTCGCCC TTCAATGTCT CTCTTGACCA ATAGGTTTAT CCGGCGAGTT GACAAGGACC
S2 (7338)  .......... .......... .......... .......... .......... .......... .......... .......... .......C.. .......... .......... .......... 
S3 (3425)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C1 (89296) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C2 (17292) .......... .......... .......... .......... .......... .......... .......... .......... .......C.. .......... .......... .......... 
C3 (2473)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                
S1 (38312) AGTGGGGGCC GGGGGTTATG GGGAAGGACC CCAGACCCTG CCCTTCCCGG CGGACCGGGA AÅ 456 ΔG (kcal/mol)
S2 (7338)  .......... .......... .......... .......... .......... .......... .. -71.0
S3 (3425)  .......... ......C... .......... .......... .......... .......... .. -73.6
C1 (89296) .......... .......... .......... .......... .......... .......... .. -71.0
C2 (17292) .......... .......... .......... .......... .......... .......... .. -71.0
C3 (2473)  .......... .......... .......... .......... .......... .......... .. -66.1

Patient 3 155
S1 (53651) CATCTTGGTA GCCACTATAG GTGGGTCTTA AGAGAAGGTT AAGATTCCTC TTGCGCCTGC GGCGAGACCG CGCACGGTCC GCAGGTGTTG GCCCTACCGG TGTGAATAAG GGCCCGACGT
S2 (1677)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C1 (72134) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C2 (1968)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C3 (1896)  .......... .......... .......... .......... .......... .......... .......... .........T. .......... .......... .......... .......... 

S1 (53651) CAGGCTCGTC GTTAAACCGA GCCCGTCACC CACCTGGGCA AACGACGCCC ACGTACGGTC CACGTCGCCC TTCAATGTCT CTCTTGACCA ATAGGCTTAG CCGGCGAGTT GACAAGGACC
S2 (1677)  ....T..... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C1 (72134) .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C2 (1968)  ....T..... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
C3 (1896)  .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... .......... 
                                                                                                                                                                                                                                                                                                                                                                                                                                                
S1 (53651) AGTGGGGGCC GGGGGCTTGG AGAAGGACTC CAAGTCCCGC CCTTCCCGGT GGGCCGGGAA AT 456 ΔG (kcal/mol)
S2 (1677)  .......... .......... .......... .......... .......... .......... .. -79.0
C1 (72134) .......... .......... .......... .......... .......... .......... .. -79.0
C2 (1968)  .......... .......... .......... .......... .......... .......... .. -79.0
C3 (1896)  .......... .......... .......... .......... .......... .......... .. -79.0
```

Technical Appendix Figure. Comparison of 5′ untranslated region human pegivirus sequences amplified from serum and cerebrospinal fluid from 3 patients with encephalitis of unclear origin, Poland, 2012–2015. Numbers in parentheses represent the number of reads representing a given sequence. Shading indicates sequences unique to cerebrospinal fluid. Nucleotide numbering follows the reference strain published by Linnen et al (*2*) (GenBank accession no. NC_001710.1). Free energies of the predicted secondary RNA structures were calculated by using Mfold version 3.2 (*26*), and the structures themselves followed the model proposed by Simons et al. (*28*). C, cerebrospinal fluid; S, serum.