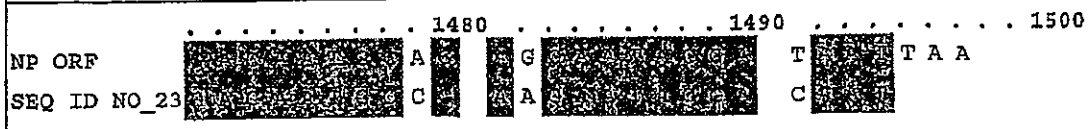
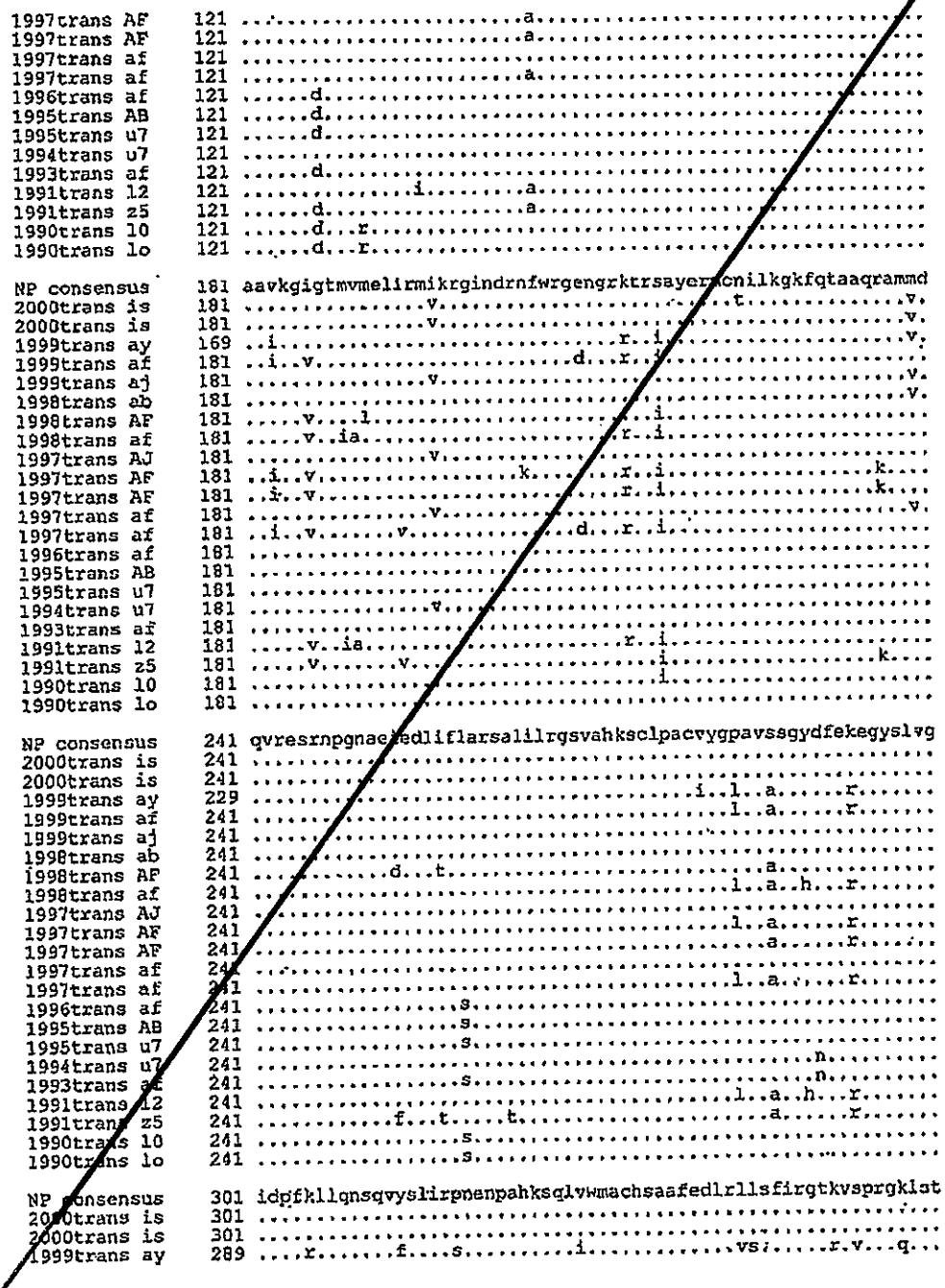
Alignment View Print



OMIGA (2.0)

NP consensus vs. 1990-2000 strains



NP consensus vs. 1990-2000 strains


```
1999trans af    301 ....r.......f.............................vs......r.i...q...
1999trans aj    301 ..........................................................
1998trans ab    301 ..........................................................
1998trans AF    301 v.......t.....................n.........vs......r.i.......
1998trans af    301 ...........f..........y.................vs.....k.i.......
1997trans AJ    301 ..........................................................
1997trans AF    301 ....r.......f.....k.d.......r...........vs.....r.i...q...
1997trans AF    301 ....r.......f.....k.........................vs.....r.i...q...
1997trans af    301 ..........................................................
1997trans af    301 ....r.......f.............................vs.....r.i...q...
1996trans af    301 ..........................................................
1995trans AB    301 ..........................................................
1995trans u7    301 ..........................................................
1994trans u7    301 ..........................................................
1993trans af    301 ..........................................................
1991trans 12    301 ...........f..............................vs.....k..v.......
1991trans z5    301 ....r.....................................v....k....l.......
1990trans 10    301 ..........................................................
1990trans lo    301 ..........................................................

NP consensus    361 rgvqiasnenmdnmgsstlelrsrywairtrsgntnqqrasagqisvqptfsvqrnlpf
2000trans is    361 ......................g.....................................
2000trans is    361 ......................g.....................................
1999trans ay    349 ..........etvd..........................h.................s...
1999trans af    361 ..........vea.d.....................................
1999trans aj    361 ......................g.....d.....................................
1998trans ab    361 ..i...................g.....................................
1998trans AF    361 ............aiv.....................................t.....
1998trans af    361 ..........vea.d.n.....................k.....
1997trans AJ    361 ..i...................g.....................................a.....
1997trans AF    361 ..........vea.d.....................f.....n.....f..
1997trans AF    361 ..........vea.d.t.....
1997trans af    361 ......................g.....
1997trans af    361 ..........vea.d.....
1996trans af    361 ............e.....
1995trans AB    361 ............e.....
1995trans u7    361 ..........
1994trans u7    361 ..........g.....
1993trans af    361 ..........e.....
1991trans 12    361 ..........ea.d.....................k.....
1991trans z5    361 ..........et.e.....................i.....
1990trans 10    361 ..........e.....
1990trans lo    361 ..........e.....

NP consensus    421 ekstmaaftgntegrtsdmr-aeiirmmegakpeevsfrgrgvfelsdekatnpivpsf
2000trans is    421 ......................-.....
2000trans is    421 ......................-.....
1999trans ay    409 ra.i.....................-t.......s....d..q.....
1999trans af    421 rp.i....k.....-t.......s.r..d...q.....
1999trans aj    421 ......................-.....
1998trans ab    421 ......................-.....
1998trans AF    421 ..t.i.....r....k.-.s.r.....q.....kr.....
1998trans af    421 .ra.....s..n.....-t.v.....s....tl..q.....s.....
1997trans AJ    421 ......................-.....
1997trans AF    421 .rv.i....k.....r....-t.......s.r..d...q.....
1997trans AF    421 .rv.i....k.....-t.......s.r..d...q.....
1997trans af    421 ......................-.....
1997trans af    421 .r..i....k.....-t.......s.r..d...q.....
1996trans af    421 ......................-.....t.....
1995trans AB    421 ......................-.....
1995trans u7    421 ......................-.....t.....
1994trans u7    421 ......................-.....
1993trans af    421 ......................-.....
1991trans 12    421 .ra....v.s..n.....-t.v.....s....dl..q.....
1991trans z5    421 drt.i....n.....-t.......s.r..d...q.....as.....
1990trans 10    421 ......................-.....
```

NP consensus vs. 1990-2000 strains


```
1990trans lo    421 .....................~.........k.........................

NP consensus    480 dmsnegsyffgdnaeeydn
2000trans is    480 e.....----------
2000trans is    480 ei....----------
1999trans ay    468 .----------------
1999trans af    480 ....................
1999trans aj    480 ....................
1998trans ab    480 ....................
1998trans AF    480 ..............d...
1998trans af    480 ....................
1997trans AJ    480 ....................
1997trans AF    480 ....................
1997trans AF    480 ....................
1997trans af    480 ....................
1997trans af    480 ....................
1996trans af    480 ....................
1995trans AB    480 ....................
1995trans u7    480 ....................
1994trans u7    480 ....................
1993trans af    480 ....................
1991trans l2    480 ....................
1991trans z5    480 ....................
1990trans l0    480 ....................
1990trans lo    480 ...:..........-----
```

- Same amino acids... dotted line
- No sequence available – dashed line
- 22 NP full, or nearly full-length sequences available for comparison from www.flu.lanl.gov
- Amino acid chosen for consensus based on amino acid with the majority of the 22 sequences. In cases of a tie, the amino acid found in the 2000 strain was favored.

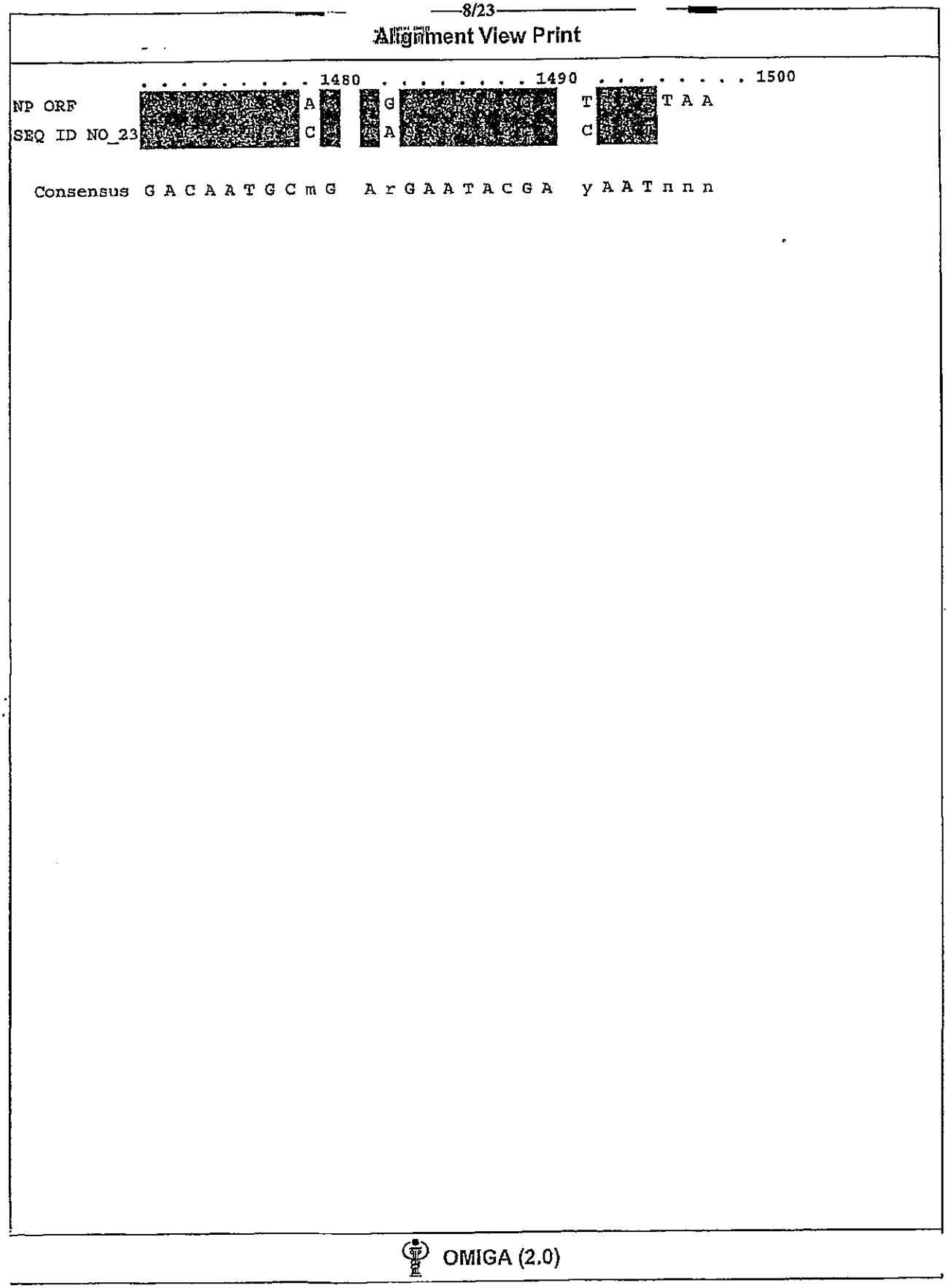


Figure 1G (Continuation)

Figure 12 (Continuation): NP consensus vs. 1990-2000 strains

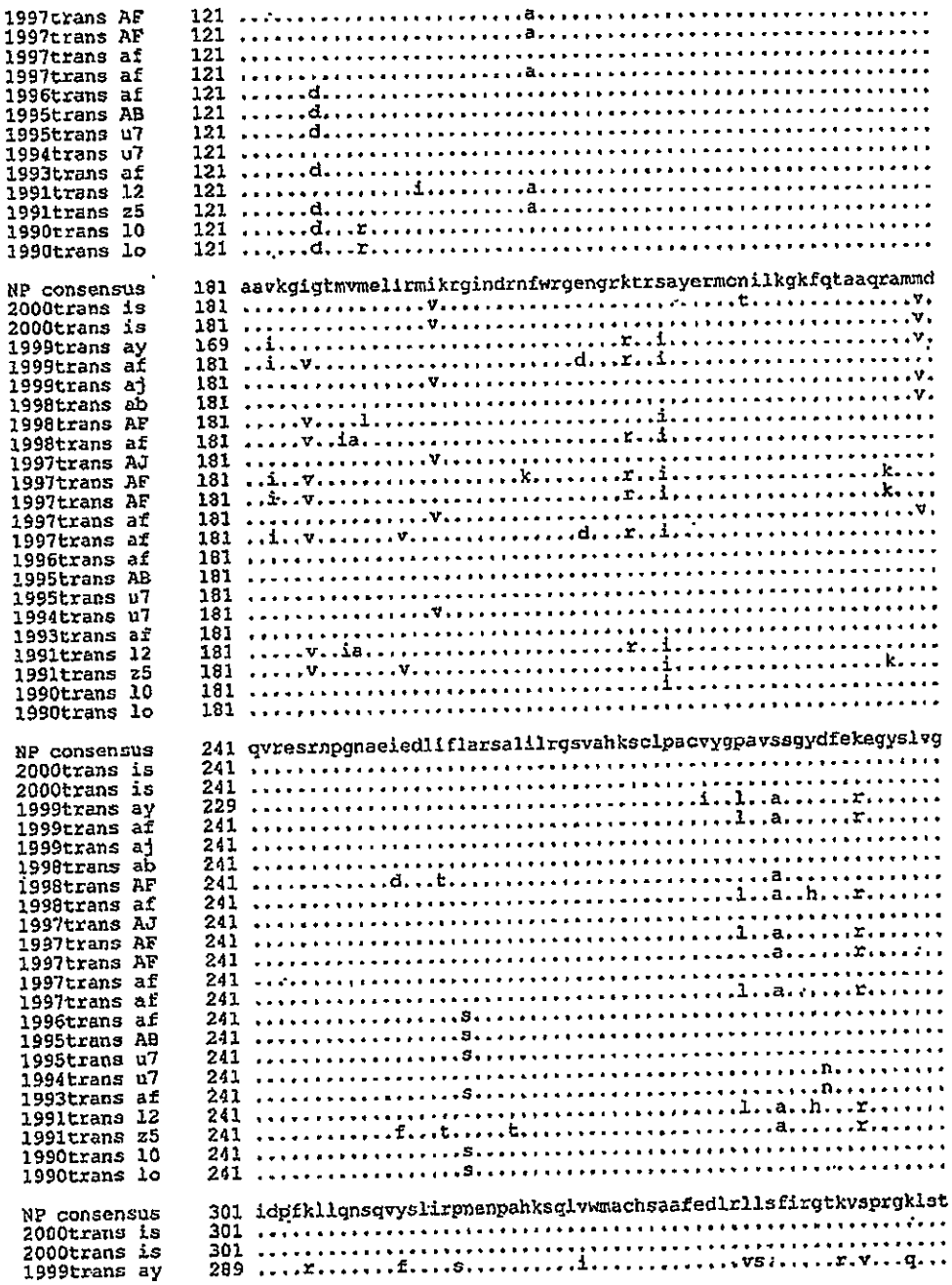


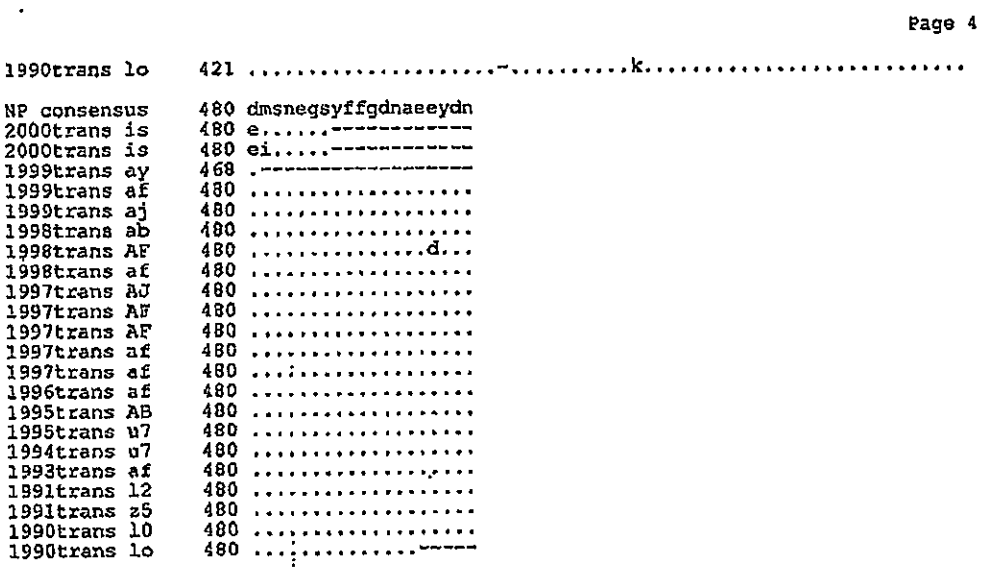
Figure 12 (Continuation): NP consensus vs. 1990-2000 strains


```
1999trans af    301 ....r.......f.............................vs......r.i...q...
1999trans aj    301 ..........................................................
1998trans ab    301 ..........................................................
1998trans AF    301 v.......t.....................n.........vs......r.l.......
1998trans af    301 ...........f.........y.....................vs.....k..i.......
1997trans AJ    301 ..........................................................
1997trans AF    301 ....r.......f.....k.d.........r............vs......r.i...q...
1997trans AF    301 ....r.......f.....k.......................vs......r.i...q...
1997trans af    301 ..........................................................
1997trans af    301 ....r.......f.............................vs......r.i...q...
1996trans af    301 ..........................................................
1995trans AB    301 ..........................................................
1995trans u7    301 ..........................................................
1994trans u7    301 ..........................................................
1993trans af    301 ..........................................................
1991trans l2    301 ...........f.............................vs.....k..v.......
1991trans z5    301 ....r.....................................v....k....l.......
1990trans l0    301 ..........................................................
1990trans lo    301 ..........................................................

NP consensus    361 rgvqiasnenmdnmgsstlelrsrywairtrsggntnqqrasaqqisvqptfsvqrnlpf
2000trans is    361 .......................g..................................
2000trans is    361 .......................g..................................
1999trans ay    349 ..........etvd.......................h.................s...
1999trans af    361 ..........vea.d.....................................
1999trans aj    361 .......................g.........d.....................
1998trans ab    361 ..i.....................g.....................................
1998trans AF    361 ............aiv.....................................t.....
1998trans af    361 ..........vea.d.n.....................k.....................
1997trans AJ    361 ..i.....................g.....................a.....
1997trans AF    361 ..........vea.d.....................f.........n......f..
1997trans AF    361 ..........vea.d.t.....................................
1997trans af    361 .......................g..................................
1997trans af    361 ..........vea.d.....................................
1996trans af    361 ............e.....................................
1995trans AB    361 ............e.....................................
1995trans u7    361 ............e.....................................
1994trans u7    361 .......................g..................................
1993trans af    361 ............e.....................................
1991trans l2    361 ..........vea.d.....................k.....................
1991trans z5    361 ..........et.e.....................................i.....
1990trans l0    361 ............e.....................................
1990trans lo    361 ............e.....................................

NP consensus    421 ekstvmaaftgntegrtsdmr-aeiirmmegakpeevsfrgrgvfelsdekatnpivpsf
2000trans is    421 .......................-..................................
2000trans is    421 .......................-..................................
1999trans ay    409 .ra.i.....................-t.......s....d...q.....................
1999trans af    421 .rp.i....k...........-t.......s.r..d...q.....................
1999trans aj    421 .......................-..................................
1998trans ab    421 .......................-..................................
1998trans AF    421 ..t.i.................r....k.-.s.r......g.........kr.........
1998trans af    421 .ra......s..n.........-t.v.....s....tl..q.............s.....
1997trans AJ    421 .......................-..................................
1997trans AF    421 .rv.i....k.......r....-t.......s.r..d...q.....................
1997trans AF    421 .rv.i....k...........-t.......s.r..d...q.....................
1997trans af    421 .......................-..................................
1997trans af    421 .r..i....k...........-t.......s.r..d...q.....................
1996trans af    421 .......................-.........t..........................
1995trans AB    421 .......................-..................................
1995trans u7    421 .......................-.........t..........................
1994trans u7    421 .......................-..................................
1993trans af    421 .......................-..................................
1991trans l2    421 .ra....v.s..n.........-t.v.....s....dl..q.....................
1991trans z5    421 drt.i....n...........-t.......s.r..d...q.............as.....
1990trans l0    421 .......................-..................................
```

Figure 12 (Continuation): NP consensus vs. 1990-2000 strains



- Same amino acids... dotted line
- No sequence available – dashed line
- 22 NP full, or nearly full-length sequences available for comparison from www.flu.lanl.gov
- Amino acid chosen for consensus based on amino acid with the majority of the 22 sequences. In cases of a tie, the amino acid found in the 2000 strain was favored.