

**Report from the Molecular Epidemiology Section of the Experimental Epidemiology Group to the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

|   |                                     |
|---|-------------------------------------|
| Serotype: <b>O</b>                            | Date: 20/08/2003                    |
| Virus isolate: <b>AFG/16/2003</b>             | Reported by: N.J. Knowles           |
| Material used: BTy 1                          | Signed (file copy only):            |
| Region sequenced: VP1                         | Seq. filename: AFG03-16             |
| RT-PCR primer set: O1C-272F/NK61              |                                     |
| Topotype: ME-SA                               | No. of ambiguities: 0               |
| Genotype/strain: PanAsia                      | Date seq. last updated: 20/08/2003  |
| No. of nt determined / no. in gene: 639 / 639 | Total no. of comparisons made: 1300 |

Comments:

**Ten Most Closely Related Viruses**

| Pos. | Virus name           | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|----------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/AFG/55/2003        | AFG03-55 | 540             | 537            | 1                  | 99.44      | 0.56         |
| 2    | O/AFG/50/2003        | AFG03-50 | 639             | 634            | 0                  | 99.22      | 0.78         |
| 3    | O/AFG/49/2003        | AFG03-49 | 638             | 632            | 1                  | 99.06      | 0.94         |
| 4    | O/AFG/56/2003        | AFG03-56 | 521             | 516            | 1                  | 99.04      | 0.96         |
| 5    | O/IND/287/99*        | IND99-AP | 164             | 162            | 1                  | 98.78      | 1.22         |
| 6    | O/UAE/7/99           | UAE99-07 | 254             | 248            | 4                  | 97.64      | 2.36         |
| 7    | O/IND/61/97* (1996)  | IND96-AB | 165             | 161            | 0                  | 97.58      | 2.42         |
| 8    | O/IND/209/99* (1998) | IND98-AU | 165             | 161            | 0                  | 97.58      | 2.42         |
| 9    | O/IND/289/97*        | IND97-AW | 165             | 161            | 0                  | 97.58      | 2.42         |
| 10   | O/IND/160/99*        | IND99-AF | 209             | 203            | 1                  | 97.13      | 2.87         |

**Relationships to Reference Virus Strains**

| Pos. | Virus name        | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|-------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/TAW/2/99        | TAW99-02 | 639             | 615            | 0                  | 96.24      | 3.76         |
| 2    | O/IND/53/79       | IND79A53 | 639             | 569            | 0                  | 89.05      | 10.95        |
| 3    | O1/Manisa/TUR/69  | TUR69--E | 639             | 564            | 0                  | 88.26      | 11.74        |
| 4    | O/IND/R2/75*      | IND75--A | 639             | 562            | 0                  | 87.95      | 12.05        |
| 5    | O/TAI/189/87*     | TAI87--B | 527             | 456            | 3                  | 86.53      | 13.47        |
| 6    | O/ISR/1/88        | ISR88-01 | 193             | 166            | 5                  | 86.01      | 13.99        |
| 7    | O/MOR/1/91        | MOR91-01 | 207             | 178            | 3                  | 85.99      | 14.01        |
| 8    | O/PHI/5/95        | PHI95-05 | 516             | 431            | 6                  | 83.53      | 16.47        |
| 9    | O/HKN/6/83        | HKN83-06 | 637             | 520            | 2                  | 81.63      | 18.37        |
| 10   | O1/BFS 1860/UK/67 | UKG67--A | 639             | 509            | 0                  | 79.66      | 20.34        |

nt, nucleotides

\*, not a WRLFMD reference number

**Report from the Molecular Epidemiology Section of the Experimental Epidemiology Group to the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

| Serotype: <b>O</b>                              | Date: 20/08/2003                    |          |                 |                |                    |            |              |
|---|-------------------------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| Virus isolate: <b>AFG/49/2003</b>               | Reported by: N.J. Knowles           |          |                 |                |                    |            |              |
| Material used: BTy 2                            | Signed (file copy only):            |          |                 |                |                    |            |              |
| Region sequenced: VP1                           | Seq. filename: AFG03-49             |          |                 |                |                    |            |              |
| RT-PCR primer set: O1C-272F/NK61                |                                     |          |                 |                |                    |            |              |
| Topotype: ME-SA                                 | No. of ambiguities: 1               |          |                 |                |                    |            |              |
| Genotype/strain: PanAsia                        | Date seq. last updated: 20/08/2003  |          |                 |                |                    |            |              |
| No. of nt determined / no. in gene: 638 / 639   | Total no. of comparisons made: 1300 |          |                 |                |                    |            |              |
| Comments:                                       |                                     |          |                 |                |                    |            |              |
| <b>Ten Most Closely Related Viruses</b>         |                                     |          |                 |                |                    |            |              |
| Pos.  | Virus name                          | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
| 1   | O/AFG/50/2003                       | AFG03-50 | 638             | 637            | 1                  | 99.84      | 0.16         |
| 2   | O/AFG/55/2003                       | AFG03-55 | 539             | 537            | 2                  | 99.63      | 0.37         |
| 3   | O/AFG/56/2003                       | AFG03-56 | 520             | 518            | 2                  | 99.62      | 0.38         |
| 4   | O/AFG/16/2003                       | AFG03-16 | 638             | 632            | 1                  | 99.06      | 0.94         |
| 5   | O/IND/287/99*                       | IND99-AP | 164             | 162            | 1                  | 98.78      | 1.22         |
| 6   | O/UAE/7/99                          | UAE99-07 | 253             | 247            | 5                  | 97.63      | 2.37         |
| 7   | O/IND/61/97* (1996)                 | IND96-AB | 165             | 161            | 0                  | 97.58      | 2.42         |
| 8   | O/IND/209/99* (1998)                | IND98-AU | 165             | 161            | 0                  | 97.58      | 2.42         |
| 9   | O/IND/289/97*                       | IND97-AW | 165             | 161            | 0                  | 97.58      | 2.42         |
| 10  | O/IRN/1/99                          | IRN99-01 | 276             | 268            | 6                  | 97.10      | 2.90         |
| <b>Relationships to Reference Virus Strains</b> |                                     |          |                 |                |                    |            |              |
| Pos.  | Virus name                          | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
| 1   | O/TAW/2/99                          | TAW99-02 | 638             | 612            | 1                  | 95.92      | 4.08         |
| 2   | O/IND/53/79                         | IND79A53 | 638             | 567            | 1                  | 88.87      | 11.13        |
| 3   | O1/Manisa/TUR/69                    | TUR69--E | 638             | 564            | 1                  | 88.40      | 11.60        |
| 4   | O/IND/R2/75*                        | IND75--A | 638             | 561            | 1                  | 87.93      | 12.07        |
| 5   | O/ISR/1/88                          | ISR88-01 | 193             | 167            | 5                  | 86.53      | 13.47        |
| 6   | O/MOR/1/91                          | MOR91-01 | 207             | 179            | 3                  | 86.47      | 13.53        |
| 7   | O/TAI/189/87*                       | TAI87--B | 526             | 453            | 4                  | 86.12      | 13.88        |
| 8   | O/PHI/5/95                          | PHI95-05 | 515             | 428            | 7                  | 83.11      | 16.89        |
| 9   | O/HKN/6/83                          | HKN83-06 | 636             | 516            | 3                  | 81.13      | 18.87        |
| 10  | O1/BFS 1860/UK/67                   | UKG67--A | 638             | 507            | 1                  | 79.47      | 20.53        |
| nt, nucleotides                                 |                                     |          |                 |                |                    |            |              |
| *, not a WRLFMD reference number                |                                     |          |                 |                |                    |            |              |

**Report from the Molecular Epidemiology Section of the Experimental Epidemiology Group to the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

|   |                                     |
|---|-------------------------------------|
| Serotype: <b>O</b>                            | Date: 20/08/2003                    |
| Virus isolate: <b>AFG/50/2003</b>             | Reported by: N.J. Knowles           |
| Material used: BTy 1                          | Signed (file copy only):            |
| Region sequenced: VP1                         | Seq. filename: AFG03-50             |
| RT-PCR primer set: O1C-272F/NK61              |                                     |
| Topotype: ME-SA                               | No. of ambiguities: 0               |
| Genotype/strain: PanAsia                      | Date seq. last updated: 20/08/2003  |
| No. of nt determined / no. in gene: 639 / 639 | Total no. of comparisons made: 1300 |

Comments:

**Ten Most Closely Related Viruses**

| Pos. | Virus name           | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|----------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/AFG/49/2003        | AFG03-49 | 638             | 637            | 1                  | 99.84      | 0.16         |
| 2    | O/AFG/55/2003        | AFG03-55 | 540             | 539            | 1                  | 99.81      | 0.19         |
| 3    | O/AFG/56/2003        | AFG03-56 | 521             | 520            | 1                  | 99.81      | 0.19         |
| 4    | O/AFG/16/2003        | AFG03-16 | 639             | 634            | 0                  | 99.22      | 0.78         |
| 5    | O/IND/287/99*        | IND99-AP | 164             | 162            | 1                  | 98.78      | 1.22         |
| 6    | O/UAE/7/99           | UAE99-07 | 254             | 249            | 4                  | 98.03      | 1.97         |
| 7    | O/IND/61/97* (1996)  | IND96-AB | 165             | 161            | 0                  | 97.58      | 2.42         |
| 8    | O/IND/209/99* (1998) | IND98-AU | 165             | 161            | 0                  | 97.58      | 2.42         |
| 9    | O/IND/289/97         | IND97-AW | 165             | 161            | 0                  | 97.58      | 2.42         |
| 10   | O/UAE/2/99           | UAE99-02 | 224             | 218            | 7                  | 97.32      | 2.68         |

**Relationships to Reference Virus Strains**

| Pos. | Virus name        | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|-------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/TAW/2/99        | TAW99-02 | 639             | 614            | 0                  | 96.09      | 3.91         |
| 2    | O/IND/53/79       | IND79A53 | 639             | 569            | 0                  | 89.05      | 10.95        |
| 3    | O1/Manisa/TUR/69  | TUR69--E | 639             | 566            | 0                  | 88.58      | 11.42        |
| 4    | O/IND/R2/75*      | IND75--A | 639             | 563            | 0                  | 88.11      | 11.89        |
| 5    | O/ISR/1/88        | ISR88-01 | 193             | 167            | 5                  | 86.53      | 13.47        |
| 6    | O/MOR/1/91        | MOR91-01 | 207             | 179            | 3                  | 86.47      | 13.53        |
| 7    | O/TAI/189/87*     | TAI87--B | 527             | 455            | 3                  | 86.34      | 13.66        |
| 8    | O/PHI/5/95        | PHI95-05 | 516             | 428            | 6                  | 82.95      | 17.05        |
| 9    | O/HKN/6/83        | HKN83-06 | 637             | 518            | 2                  | 81.32      | 18.68        |
| 10   | O1/BFS 1860/UK/67 | UKG67--A | 639             | 509            | 0                  | 79.66      | 20.34        |

nt, nucleotides

\*, not a WRLFMD reference number

**Report from the Molecular Epidemiology Section of the Experimental Epidemiology Group to the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

|   |                                     |
|---|-------------------------------------|
| Serotype: <b>O</b>                            | Date: 20/08/2003                    |
| Virus isolate: <b>AFG/55/2003</b>             | Reported by: N.J. Knowles           |
| Material used: BTy1                           | Signed (file copy only):            |
| Region sequenced: VP1                         | Seq. filename: AFG03-55             |
| RT-PCR primer set: O1C-272F/NK61              |                                     |
| Topotype: ME-SA                               | No. of ambiguities: 1               |
| Genotype/strain: PanAsia                      | Date seq. last updated: 20/08/2003  |
| No. of nt determined / no. in gene: 540 / 639 | Total no. of comparisons made: 1300 |

Comments:

**Ten Most Closely Related Viruses**

| Pos. | Virus name           | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|----------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/AFG/50/2003        | AFG03-50 | 540             | 539            | 1                  | 99.81      | 0.19         |
| 2    | O/AFG/56/2003        | AFG03-56 | 520             | 519            | 2                  | 99.81      | 0.19         |
| 3    | O/AFG/49/2003        | AFG03-49 | 539             | 537            | 2                  | 99.63      | 0.37         |
| 4    | O/AFG/16/2003        | AFG03-16 | 540             | 537            | 1                  | 99.44      | 0.56         |
| 5    | O/IND/287/99*        | IND99-AP | 163             | 161            | 2                  | 98.77      | 1.23         |
| 6    | O/UAE/7/99           | UAE99-07 | 156             | 154            | 4                  | 98.72      | 1.28         |
| 7    | O/UAE/2/99           | UAE99-02 | 129             | 126            | 4                  | 97.67      | 2.33         |
| 8    | O/IND/209/99* (1998) | IND98-AU | 164             | 160            | 1                  | 97.56      | 2.44         |
| 9    | O/IND/61/97* (1996)  | IND96-AB | 164             | 160            | 1                  | 97.56      | 2.44         |
| 10   | O/IND/289/97*        | IND97-AW | 164             | 160            | 1                  | 97.56      | 2.44         |

**Relationships to Reference Virus Strains**

| Pos. | Virus name        | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|-------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/TAW/2/99        | TAW99-02 | 540             | 519            | 1                  | 96.11      | 3.89         |
| 2    | O/IND/53/79       | IND79A53 | 540             | 483            | 1                  | 89.44      | 10.56        |
| 3    | O1/Manisa/TUR/69  | TUR69--E | 540             | 481            | 1                  | 89.07      | 10.93        |
| 4    | O/IND/R2/75*      | IND75--A | 540             | 475            | 1                  | 87.96      | 12.04        |
| 5    | O/ISR/1/88        | ISR88-01 | 192             | 167            | 6                  | 86.98      | 13.02        |
| 6    | O/MOR/1/91        | MOR91-01 | 206             | 179            | 4                  | 86.89      | 13.11        |
| 7    | O/TAI/189/87*     | TAI87--B | 526             | 456            | 4                  | 86.69      | 13.31        |
| 8    | O/PHI/5/95        | PHI95-05 | 515             | 429            | 7                  | 83.30      | 16.70        |
| 9    | O/HKN/6/83        | HKN83-06 | 538             | 438            | 3                  | 81.41      | 18.59        |
| 10   | O1/BFS 1860/UK/67 | UKG67--A | 540             | 428            | 1                  | 79.26      | 20.74        |

nt, nucleotides

\*, not a WRLFMD reference number

**Report from the Molecular Epidemiology Section of the Experimental Epidemiology Group to the Head of the World Reference Laboratory for FMD (Non-QAU Form)**

|   |                                     |
|---|-------------------------------------|
| Serotype: <b>O</b>                            | Date: 20/08/2003                    |
| Virus isolate: <b>AFG/56/2003</b>             | Reported by: N.J. Knowles           |
| Material used: 10% epithelium susp.           | Signed (file copy only):            |
| Region sequenced: VP1                         | Seq. filename: AFG03-56             |
| RT-PCR primer set: O1C-272F/NK61              |                                     |
| Topotype: ME-SA                               | No. of ambiguities: 1               |
| Genotype/strain: PanAsia                      | Date seq. last updated: 20/08/2003  |
| No. of nt determined / no. in gene: 521 / 639 | Total no. of comparisons made: 1300 |

Comments:

**Ten Most Closely Related Viruses**

| Pos. | Virus name           | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|----------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/AFG/50/2003        | AFG03-50 | 521             | 520            | 1                  | 99.81      | 0.19         |
| 2    | O/AFG/55/2003        | AFG03-55 | 520             | 519            | 2                  | 99.81      | 0.19         |
| 3    | O/AFG/49/2003        | AFG03-49 | 520             | 518            | 2                  | 99.62      | 0.38         |
| 4    | O/AFG/16/2003        | AFG03-16 | 521             | 516            | 1                  | 99.04      | 0.96         |
| 5    | O/UAE/7/99           | UAE99-07 | 136             | 134            | 5                  | 98.53      | 1.47         |
| 6    | O/IND/287/99*        | IND99-AP | 164             | 161            | 1                  | 98.17      | 1.83         |
| 7    | O/UAE/2/99           | UAE99-02 | 111             | 108            | 3                  | 97.30      | 2.70         |
| 8    | O/IND/209/99* (1998) | IND98-AU | 165             | 160            | 0                  | 96.97      | 3.03         |
| 9    | O/IND/61/97* (1996)  | IND96-AB | 165             | 160            | 0                  | 96.97      | 3.03         |
| 10   | O/IND/289/97*        | IND97-AW | 165             | 160            | 0                  | 96.97      | 3.03         |

**Relationships to Reference Virus Strains**

| Pos. | Virus name        | Filename | No. nt compared | No. nt matched | No. of ambiguities | % Identity | % Difference |
|------|-------------------|----------|-----------------|----------------|--------------------|------------|--------------|
| 1    | O/TAW/2/99        | TAW99-02 | 521             | 499            | 1                  | 95.78      | 4.22         |
| 2    | O1/Manisa/TUR/69  | TUR69--E | 521             | 463            | 1                  | 88.87      | 11.13        |
| 3    | O/IND/53/79       | IND79A53 | 521             | 462            | 1                  | 88.68      | 11.32        |
| 4    | O/IND/R2/75*      | IND75--A | 521             | 456            | 1                  | 87.52      | 12.48        |
| 5    | O/ISR/1/88        | ISR88-01 | 193             | 167            | 5                  | 86.53      | 13.47        |
| 6    | O/MOR/1/91        | MOR91-01 | 207             | 179            | 3                  | 86.47      | 13.53        |
| 7    | O/TAI/189/87*     | TAI87--B | 513             | 442            | 4                  | 86.16      | 13.84        |
| 8    | O/PHI/5/95        | PHI95-05 | 515             | 427            | 7                  | 82.91      | 17.09        |
| 9    | O/HKN/6/83        | HKN83-06 | 519             | 419            | 3                  | 80.73      | 19.27        |
| 10   | O1/BFS 1860/UK/67 | UKG67--A | 521             | 409            | 1                  | 78.50      | 21.50        |

nt, nucleotides

\*, not a WRLFMD reference number