**Supplemental materials**

**Supplemental material Figure 1.** Maximum-likelihood phylogenetic tree of the **MP gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 2.** Maximum-likelihood phylogenetic tree of the **NA gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 3.** Maximum-likelihood phylogenetic tree of the **PA gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 4.** Maximum-likelihood phylogenetic tree of the **NP gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 5.** Maximum-likelihood phylogenetic tree of the **NS gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 6.** Maximum-likelihood phylogenetic tree of the **PB1 gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 7.** Maximum-likelihood phylogenetic tree of the **PB2 gene**. Influenza A(H9N2) virus from Ghana collected in Brong-Ahafo are indicated in red, those collected in the Ashanti region are in blue. Bootstrap supports higher than 80% are indicated next to nodes. The scale bar indicates nucleotide substitutions per site.

**Supplemental material Figure 8**. Time-scaled Maximum Clade Credibility (MCC) tree of Influenza A(H9N2) virus. H9N2 viruses from Ghana are marked in red. Posterior probabilities higher than 0.8 are indicated next to the nodes. Node bars show the 95% highest posterior density (HPD) of node height. Mean time to the most recent common ancestor (tMRCA), with 95% HPD in parenthesis, for the ancestral nodes of the Ghanaian viruses are provided in the grey boxes.

**Supplemental material Table 1.** Molecular testing results. The analyses performed are indicated as follows: RRT-PCR for influenza A (real-time Reverse Transcriptase PCR for Influenza A, gene M); RRT-PCR for H9/H5/H7/N2 (real-time Reverse Transcriptase PCR for H9/H5/H7/N2 subtype, respectively); RRT-PCR for AAvV-1 (real-time Reverse Transcriptase PCR for Avian Avulavirus-1); RRT-PCR for IBV (real-time Reverse Transcriptase PCR for Infectious Bronchitis Virus).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **ID No.** | **SAMPLE** | **DATE** | **LOCATION** | **ANALYSIS** | **RESULT** |
| 1513/1 | Tracheal swabs | 29/11/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/2 | Tracheal swabs | 29/11/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/3 | Tracheal swabs | 29/11/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/4 | Tracheal swabs | 29/11/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/5 | Tracheal swabs | 29/11/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/6 | Tissue sample (pool of organs) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/7 | Tissue sample (pool of organs) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/8 | Tissue sample (pool of organs) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/9 | Tissue sample (pool of organs) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/10 | Tissue sample (pool of organs) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/11 | Tissue sample (trachea) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/12 | Tissue sample (trachea) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/13 | Tissue sample (trachea) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/14 | Tissue sample (trachea) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/15 | Tissue sample (trachea) | 05/12/2017 | Dorma Ahenkro - Brong-Ahafo | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/16 | Tissue sample (pool of organs) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/17 | Tissue sample (pool of organs) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/18 | Tissue sample (pool of organs) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/19 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/20 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/21 | Tissue sample (ltrachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/22 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/23 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/24 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/25 | Tissue sample (pool of organs) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/26 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Positive |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/27 | Tissue sample (trachea) | 02/02/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/28 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/29 | Tissue sample (trachea) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/30 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/31 | Tissue sample (trachea) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/32 | Tissue sample (trachea) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/33 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/34 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for N2 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/35 | Tissue sample (trachea) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/36 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/37 | Tissue sample (trachea) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Positive |
| HA cleavage site | RSSR/GLF |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/38 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/39 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/40 | Tissue sample (brain) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/41 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/42 | Tissue sample (brain) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/43 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/44 | Tissue sample (brain) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Negative |
|  |  |  |  |  |  |
| 1513/45 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/46 | Tissue sample (brain) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Positive |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/47 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for IBV | Positive |
|  |  |  |  |  |  |
| 1513/48 | Tissue sample (pool of organs) | 19/01/2018 | Kumasi - Ashanti | RRT-PCR for influenza A | Negative |
| RRT-PCR for H9 | Negative |
| RRT-PCR for AAvV-1 | Negative |
| RRT-PCR for H5 | Negative |
| RRT-PCR for H7 | Negative |
| RRT-PCR for IBV | Positive |

**Supplemental materials Table 2.** Sequences from GISAID’s EpiFlu™ Database on which this research is in part base

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
| *We acknowledge the authors, originating and submitting laboratories of the sequences from GISAID’s EpiFlu*™ Database on which this research is in part based. The list is detailed below. | | | | | | | |
| *All submitters of data may be contacted directly via the GISAID website* ***www.gisaid.org*** | | | | | | | |
| **Segment ID** | **Segment** | **Country** | **Collection date** | **Isolate name** | **Originating Lab** | **Submitting Lab** | **Authors** |
| EPI714329 | HA | Germany | 2015-Jan-01 | A/turkey/Germany/AR434-15/2015 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Harder,TC |
| EPI585519 | HA | United Kingdom | 2013-Apr-14 | A/turkey/England/13538/2013 | Animal and Plant Health Agency (APHA) | Animal and Plant Health Agency (APHA) | Reid, SM; Banks, J; Ceeraz, V; Cox, WJ; Howard, WA; Puranik, A; Collins, S; Seekings, A; Manvell, R; Irvine, RM; Brown, IH |
| EPI585514 | HA | United Kingdom | 2013-Apr-14 | A/turkey/England/13437/2013 | Animal and Plant Health Agency (APHA) | Animal and Plant Health Agency (APHA) | Reid, SM; Banks, J; Ceeraz, V; Cox, WJ; Howard, WA; Puranik, A; Collins, S; Seekings, A; Manvell, R; Irvine, RM; Brown, IH |
| EPI505106 | HA | Poland | 2013-May-06 | A/turkey/Poland/16/13 |  | National Veterinary Research Institut Poland, PIWet-PIB |  |
| EPI505105 | HA | Poland | 2013-May-14 | A/turkey/Poland/20/13 |  | National Veterinary Research Institut Poland, PIWet-PIB |  |
| EPI500817 | HA | Poland | 2013-Apr-23 | A/turkey/Poland/14/13 |  | National Veterinary Research Institut Poland, PIWet-PIB |  |
| EPI505111 | HA | Poland | 2013-Sep-22 | A/common coot/Poland/88/13 |  | National Veterinary Research Institut Poland, PIWet-PIB |  |
| EPI540507 | HA | Bangladesh | 2013-Jan-28 | A/poultry/Bangladesh/91412/2013 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540505 | HA | Bangladesh | 2012-Dec-15 | A/poultry/Bangladesh/91353/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540503 | HA | Bangladesh | 2012-Dec-15 | A/poultry/Bangladesh/91354/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540495 | HA | Bangladesh | 2012-Nov-29 | A/avian/Bangladesh/91286/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540487 | HA | Bangladesh | 2012-Nov-19 | A/avian/Bangladesh/91254/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540479 | HA | Bangladesh | 2012-Nov-20 | A/avian/Bangladesh/91277/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540463 | HA | Bangladesh | 2012-Dec-15 | A/poultry/Bangladesh/91349/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI540455 | HA | Bangladesh | 2012-Dec-15 | A/poultry/Bangladesh/91311/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI457491 | HA | Bangladesh | 2009-Mar-05 | A/duck/Bangladesh/1009/2009 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention |  |
| EPI301552 | HA | Saudi Arabia | 2006-Jan-01 | A/falcon/Saudi Arabia/08vir3489-40-as977/2006 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301466 | HA | Jordan | 2004-Jan-01 | A/duck/Jordan/1436-890/2004 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI1227018 | HA | Russian Federation | 2018-Feb-08 | A/chicken/Amur\_Russia/17/2018 |  | Research Institute of Experimental and Clinical Medicine |  |
| EPI1040557 | HA | Bangladesh | 2006-Jan-01 | A/chicken/Bangladesh/AR2108-13/2006 |  | Friedrich-Loeffler-Institut |  |
| EPI714327 | HA | Iran, Islamic Republic of | 1998-Jan-01 | A/chicken/Iran/AR249-08/1998 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Harder,TC |
| EPI714319 | HA | Egypt | 2014-Jan-01 | A/chicken/Egypt/AR241-15/2014 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa,A.M; Harder,TC |
| EPI557513 | HA | Egypt | 2013-Mar-13 | A/chicken/Egypt/NLQP488V-AR761/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557505 | HA | Egypt | 2013-Mar-13 | A/chicken/Egypt/NLQP426V-AR760/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557489 | HA | Egypt | 2013-Feb-14 | A/chicken/Egypt/NLQP123VD-AR758/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557481 | HA | Egypt | 2013-Feb-09 | A/chicken/Egypt/NLQP257V-AR757/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557473 | HA | Egypt | 2013-Jan-30 | A/chicken/Egypt/NLQP194V-AR756/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557465 | HA | Egypt | 2013-Jan-23 | A/chicken/Egypt/NLQP73VD-AR755/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557457 | HA | Egypt | 2013-Jan-20 | A/chicken/Egypt/NLQP139V-AR754/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI557162 | HA | Egypt | 2014-Apr-15 | A/chicken/Egypt/BSU4714-AR2217/2014 |  | Friedrich-Loeffler-Institut | Naguib,M.M;El-Kady,M.F; Abo-Zeid,H.H; Hassan, K.E; Beer,M; Harder,TC |
| EPI557160 | HA | Egypt | 2014-Apr-15 | A/chicken/Egypt/BSU4614-AR2216/2014 |  | Friedrich-Loeffler-Institut | Naguib,M.M;El-Kady,M.F; Abo-Zeid,H.H; Hassan, K.E; Beer,M; Harder,TC |
| EPI557158 | HA | Egypt | 2014-Apr-15 | A/chicken/Egypt/BSU4214-AR2215/2014 |  | Friedrich-Loeffler-Institut | Naguib,M.M;El-Kady,M.F; Abo-Zeid,H.H; Hassan, K.E; Beer,M; Harder,TC |
| EPI557156 | HA | Egypt | 2014-Apr-15 | A/chicken/Egypt/BSU3614-AR2212/2014 |  | Friedrich-Loeffler-Institut | Naguib,M.M;El-Kady,M.F; Abo-Zeid,H.H; Hassan, K.E; Beer,M; Harder,TC |
| EPI557154 | HA | Egypt | 2013-Apr-15 | A/chicken/Egypt/BSU35KMB-AR2196/2013 |  | Friedrich-Loeffler-Institut | Naguib,M.M;El-Kady,M.F; Hassan, K.E; Abo-Zeid,H.H; Beer,M; Harder,TC |
| EPI557152 | HA | Egypt | 2013-Apr-15 | A/chicken/Egypt/BSU32KMB-AR2194/2013 |  | Friedrich-Loeffler-Institut | Naguib,M.M; El-Kady,M.F; Hassan, K.E; Abo-Zeid,H.H; Beer,M; Harder,TC |
| EPI499473 | HA | Bangladesh | 2011-Jan-01 | A/chicken/Bangladesh/11rs1984-38/2011 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Heidari,A.; Yamage,M.; Giasuddin,M.; Khan,S.R.; Cattoli,G. |
| EPI397896 | HA | Jordan | 2007-Jan-01 | A/chicken/Jordan/09vir579-4/2007 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI355392 | HA | Egypt | 2011-Jan-01 | A/chicken/Egypt/11vir4453-132/VRLCU/2011 |  | Istituto Zooprofilattico Sperimentale Delle Venezie |  |
| EPI355384 | HA | Egypt | 2011-Mar-05 | A/chicken/Egypt/11vir4453-274/2011 |  | Istituto Zooprofilattico Sperimentale Delle Venezie |  |
| EPI355122 | HA | Egypt | 2011-Mar-05 | A/chicken/Egypt/11vir4453-280/2011 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Monne, I.; Hussein, H.A.; Fusaro, A.; Valastro, V.; Hamoud, M.M.; Rabab, A.; Noseir, S.; Capua, I.; Cattoli, G. |
| EPI355114 | HA | Egypt | 2010-Dec-09 | A/chicken/Egypt/11vir4453-276/2010 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Monne, I.; Hussein, H.A.; Fusaro, A.; Valastro, V.; Hamoud, M.M.; Rabab, A.; Noseir, S.; Capua, I.; Cattoli, G. |
| EPI355106 | HA | Egypt | 2011-Mar-05 | A/chicken/Egypt/11vir4453-275/2011 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Monne, I.; Hussein, H.A.; Fusaro, A.; Valastro, V.; Hamoud, M.M.; Rabab, A.; Noseir, S.; Capua, I.; Cattoli, G. |
| EPI355098 | HA | Egypt | 2011-Mar-05 | A/chicken/Egypt/11vir4453-273/2011 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Monne, I.; Hussein, H.A.; Fusaro, A.; Valastro, V.; Hamoud, M.M.; Rabab, A.; Noseir, S.; Capua, I.; Cattoli, G. |
| EPI355090 | HA | Egypt | 2011-Mar-05 | A/chicken/Egypt/11vir4453-272/2011 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Monne, I.; Hussein, H.A.; Fusaro, A.; Valastro, V.; Hamoud, M.M.; Rabab, A.; Noseir, S.; Capua, I.; Cattoli, G. |
| EPI301655 | HA | Qatar | 2008-Jan-01 | A/chicken/Qatar/4576-4/2008 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301649 | HA | Iraq | 2005-Jan-01 | A/chicken/Iraq/09vir579-8/2005 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301631 | HA | Iran, Islamic Republic of | 2009-Jan-01 | A/chicken/Iran/10VIR854-4/2009 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301623 | HA | Iran, Islamic Republic of | 2002-Jan-01 | A/chicken/Iran/10VIR854-1/2002 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301615 | HA | Iran, Islamic Republic of | 2009-Jan-01 | A/chicken/Iran/10VIR854-3/2009 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301607 | HA | Iran, Islamic Republic of | 2008-Jan-01 | A/chicken/Iran/10VIR854-5/2008 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301599 | HA | United Arab Emirates | 2008-Jan-01 | A/chicken/Dubai/09vir3771-3/2008 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301591 | HA | United Arab Emirates | 2008-Jan-01 | A/chicken/Dubai/09vir3771-2/2008 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301584 | HA | Saudi Arabia | 2008-Jan-01 | A/chicken/Saudi Arabia/08vir3489-50-as118/2008 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301576 | HA | Saudi Arabia | 2008-Jan-01 | A/chicken/Saudi Arabia/08vir3489-51-as366/2008 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301568 | HA | Saudi Arabia | 2007-Jan-01 | A/chicken/Saudi Arabia/08vir3489-47-as215/2007 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301560 | HA | Saudi Arabia | 2007-Jan-01 | A/chicken/Saudi Arabia/08vir3489-48-as997/2007 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301536 | HA | Saudi Arabia | 2006-Jan-01 | A/chicken/Saudi Arabia/08vir3489-44-as253/2006 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301528 | HA | Saudi Arabia | 2005-Jan-01 | A/chicken/Saudi Arabia/08vir3489-38-as92/2005 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301522 | HA | Saudi Arabia | 2005-Jan-01 | A/chicken/Saudi Arabia/08vir3489-33-as638/2005 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301514 | HA | Jordan | 2007-Jan-01 | A/chicken/Jordan/09vir579-2/2007 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301506 | HA | Jordan | 2007-Jan-01 | A/chicken/Jordan/09vir579-3/2007 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301498 | HA | Jordan | 2010-Jan-01 | A/chicken/Jordan/436-2/2010 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301490 | HA | Jordan | 2010-Jan-01 | A/chicken/Jordan/436-1/2010 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301482 | HA | Jordan | 2004-Jan-01 | A/chicken/Jordan/1436-997/2004 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI301458 | HA | Jordan | 2004-Jan-01 | A/chicken/Jordan/1436-1451/2004 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI223123 | HA | Afghanistan | 2009-Jan-01 | A/chicken/Afghanistan/329-8vir09-AFG-Heart7/2009 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Viviana,Valastro; Annalisa,Salviato; Alice,Fusaro; Isabella,Monne; Mariam,Habib; Ghulam,Ziay; Juan,GarciaGarcia; Giovanni,Cattoli; Ilaria,Capua |
| EPI223115 | HA | Afghanistan | 2009-Jan-01 | A/chicken/Afghanistan/329-7vir09-AFG-Heart6/2009 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Viviana,Valastro; Annalisa,Salviato; Alice,Fusaro; Isabella,Monne; Mariam,Habib; Ghulam,Ziay; Juan,GarciaGarcia; Giovanni,Cattoli; Ilaria,Capua |
| EPI223107 | HA | Afghanistan | 2008-Jan-01 | A/chicken/Afghanistan/329-6vir09-AFG-Khost9/2008 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Viviana,Valastro; Annalisa,Salviato; Alice,Fusaro; Isabella,Monne; Mariam,Habib; Ghulam,Ziay; Juan,GarciaGarcia; Giovanni,Cattoli; Ilaria,Capua |
| EPI223091 | HA | Afghanistan | 2008-Jan-01 | A/chicken/Afghanistan/329-4vir09-AFG-Khost3/2008 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Viviana,Valastro; Annalisa,Salviato; Alice,Fusaro; Isabella,Monne; Mariam,Habib; Ghulam,Ziay; Juan,GarciaGarcia; Giovanni,Cattoli; Ilaria,Capua |
| EPI223083 | HA | Afghanistan | 2008-Jan-01 | A/chicken/Afghanistan/329-3vir09-AFG-Khost2/2008 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Viviana,Valastro; Annalisa,Salviato; Alice,Fusaro; Isabella,Monne; Mariam,Habib; Ghulam,Ziay; Juan,GarciaGarcia; Giovanni,Cattoli; Ilaria,Capua |
| EPI1274603 | HA | Russian Federation | 2018-May-08 | A/chicken/Primorsky\_Krai/03/2018 |  | State Research Center of Virology and Biotechnology (VECTOR) | Ivan,Susloparov; Natalya,Goncharova; Natalya,Kolosova; Alexey,Danilenko; Vasiliy,Marchenko; Alexander,Ryzhikov |
| EPI1087908 | HA | Egypt | 2015-Mar-10 | A/Chicken/Egypt/102VL/2015 | National Laboratory for Veterinary Quality Control on Poultry production- Animal Health Research Inistitute | Animal Health Research Institute | 'Moataz, Soliman'; Abdelsatar, Arafa'; 'Ahmed, Youssef"; 'Mohamed, El-Shahidy' |
| EPI1087906 | HA | Egypt | 2014-Nov-14 | A/Chicken/Egypt/53RSF/2014 | National Laboratory for Veterinary Quality Control on Poultry production- Animal Health Research Inistitute | Animal Health Research Institute | 'Moataz, Soliman'; 'Abdelsatar, Arafa'; 'Ahmed, Youssef'; 'Mohamed, El-Shahidy' |
| EPI1086373 | HA | Egypt | 2016-Apr-12 | A/Chicken/Egypt/374V/2016 | National Laboratory for Veterinary Quality Control on Poultry production- Animal Health Research Inistitute | Animal Health Research Institute | 'Moataz, Soliman'; 'Abdelsatar, Arafa'; 'Ahmed, Youssef'; 'Mohamed, El Shahidy' |
| EPI557133 | HA | Egypt | 2013-Jan-15 | A/Chicken/Egypt/BSU21KMB-AR2188/2013 |  | Friedrich-Loeffler-Institut | Naguib,M.M; El-Kady,M.F; Hassan, K.E; Abo-Zeid,H.H; Beer,M; Harder,TC |
| EPI420764 | HA | Netherlands | 2010-Dec-10 | A/chicken/Netherlands/10020245/2010 | Wageningen Bioveterinary Research | Erasmus Medical Center | Verhagen, Josanne; Heutink, Rene; Koch, Guus |
| EPI301544 | HA | Saudi Arabia | 2006-Jan-01 | A/quail/Saudi Arabia/08vir3489-46-as104/2006 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI744948 | HA | Bangladesh | 2013-Oct-26 | A/quail/Bangladesh/337/2013 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention |  |
| EPI744942 | HA | Bangladesh | 2013-Dec-05 | A/chicken/Bangladesh/OP-4/2013 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention |  |
| EPI540471 | HA | Bangladesh | 2012-Nov-19 | A/avian/Bangladesh/91256/2012 | Institute of Epidemiology Disease Control and Research (IEDCR) & Bangladesh National Influenza Centre (NIC) | Centers for Disease Control and Prevention | Gerloff, Nancy; Simpson, Natosha; Davis, C. Todd |
| EPI557497 | HA | Egypt | 2013-Mar-05 | A/chicken/Egypt/NLQP758V-AR759/2013 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa, A.M; Selim,A.A; Hassan,M.K; Beer,M; Harder,TC |
| EPI714323 | HA | Egypt | 2014-Jan-01 | A/chicken/Egypt/AR253-15/2011 |  | Friedrich-Loeffler-Institut | Naguib, M.M; Arafa,A.M; Harder,TC |
| EPI301474 | HA | Jordan | 2004-Jan-01 | A/chicken/Jordan/1436-643/2004 | Istituto Zooprofilattico Sperimentale Delle Venezie | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI397898 | HA | Jordan | 2007-Jan-01 | A/chicken/Jordan/09vir579-1/2007 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Monne,I.; Salviato,A.; Valastro,V.; Schivo,A.; Amarin,N.M.; Gonzalez,C.; Ismail,M.M.; AlBlowi,M.H.; Khan,O.A.; MakenAli,A.S.; Hedayati,A.; Garcia,J.G.; Ziay,G.M.; Shoushtari,A.; AlQahtani,K.N.; Capua,I.; Holmes,E.C.; Cattoli,G. |
| EPI223099 | HA | Afghanistan | 2008-Jan-01 | A/chicken/Afghanistan/329-5vir09-AFG-Khost4/2008 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Viviana,Valastro; Annalisa,Salviato; Alice,Fusaro; Isabella,Monne; Mariam,Habib; Ghulam,Ziay; Juan,GarciaGarcia; Giovanni,Cattoli; Ilaria,Capua |
| EPI223075 | HA | Afghanistan | 2008-Jan-01 | A/chicken/Afghanistan/329-2vir09-AFG-Khost1/2008 |  | Istituto Zooprofilattico Sperimentale Delle Venezie | Fusaro,A.; Salviato,A.; Schivo,A.; Monne,I.; Ahmad,Mir; Cattoli,G.; Capua,I.; Valastro,V.; Habib,M.; Ziay,G.; GarciaGarcia,J. |
| EPI1274611 | HA | Russian Federation | 2018-May-08 | A/chicken/Primorsky\_Krai/05/2018 |  | State Research Center of Virology and Biotechnology (VECTOR) | Ivan,Susloparov; Natalya,Goncharova; Natalya,Kolosova; Alexey,Danilenko; Vasiliy,Marchenko; Alexander,Ryzhikov |
| EPI1040559 | HA | Egypt | 2013-Mar-05 | A/chicken/Egypt/AR759-14/2013 |  | Friedrich-Loeffler-Institut |  |
| EPI1087901 | HA | Egypt | 2016-Aug-10 | A/ Quail /Egypt/1253V/2016 | National Laboratory for Veterinary Quality Control on Poultry production- Animal Health Research Inistitute | Animal Health Research Institute | Moataz M. Soliman. Abdelsatar A Arafa , Ahmed Youssef I. Mohamed El Shahidy |