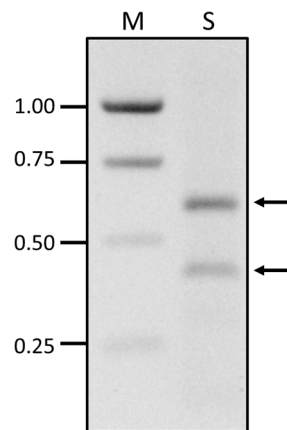
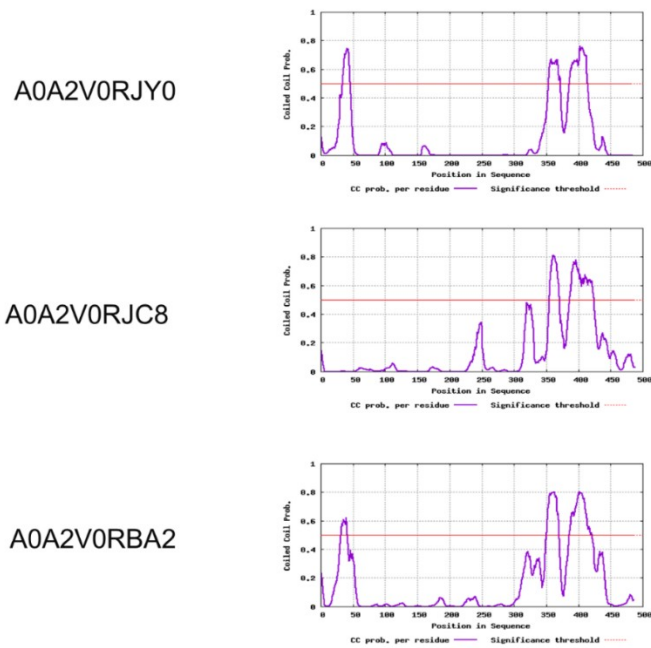


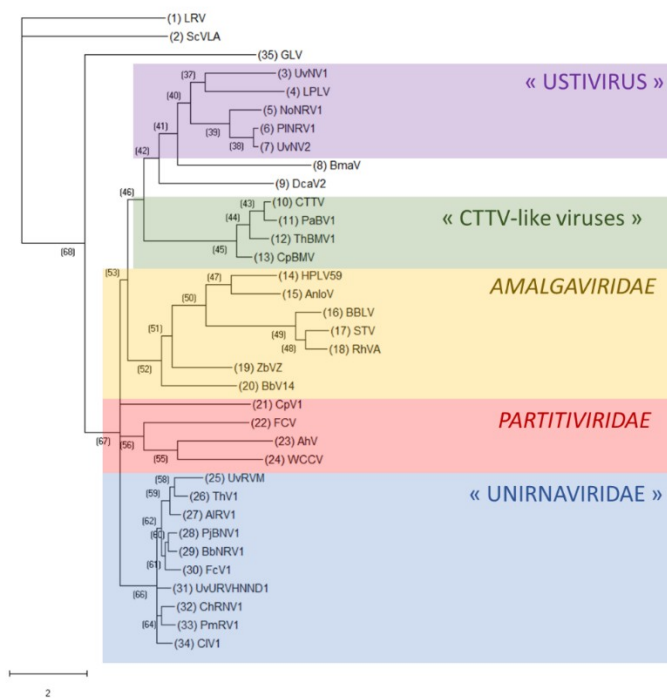
**Figure S1.** Electrophoresis agarose (1%) gel showing sample obtained after dsRNA extraction from *F. culmorum* A104-1. M: DNA weight markers (Promega 1 kb ladder). Lane 1: non-treated extracted sample. Lane 2: sample treated with DNase I. Lane 3: sample treated with S1 nuclease. Numbers on the left refer to chosen DNA molecular weights expressed in kilobase.



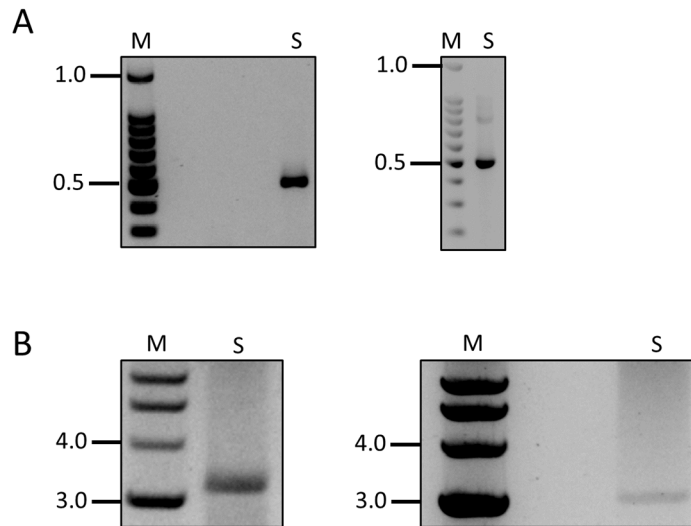
**Figure S2.** Electrophoresis agarose (1%) gel showing the two amplicons obtained (black arrows) after RT-PCR on the dsRNA using the degenerate primer. M: DNA weight markers (Promega 1 kb ladder). S: sample. Numbers on the left refer to chosen DNA molecular weights expressed in kilobase.



**Figure S3.** Coiled-coil prediction using Deepcoil for the three proteins obtained after HMMERsearch on unirnaviruses ORF1p.



**Figure S4.** Phylogenetic tree of FcV1 ORF2 and related RdRp. The numbers next to nodes refer the support values. Members of the family *Totiviridae* (GLV, LRV and ScVLA) were taken to root the initial tree.



**Figure S5.** Analysis for the presence of FcV1 in other *F. culmorum* strains. (a) Electrophoresis agarose (1%) gels showing amplicon obtained after RT-PCR on RNA from the strain Fc30 (left) and PVS-Fu353 (right). M: Promega 100 bp. S: sample; (b) Electrophoresis agarose (1%) gels showing dsRNA extracted from the strain Fc30 (left) and PVS-Fu353 (right). M: Promega 1 kb. S: sample. For all gels, numbers on the left refer to chosen DNA molecular weights expressed in kilobase.

**Table S1.** Accession numbers of ORF1p of unirnaviruses, amalgaviruses and ustiviruses.

|  | <b>Accession number of ORF1p</b> |
|--|----------------------------------|
| <b>“UNIRNAVIRIDAE”</b>   |                                  |
| Penicillium janczewskii Beauveria bassiana-like virus 1 (PjBIV1) | ALO50134.1                       |
| Beauveria bassiana non-segmented virus 1 (BbNV1)                 | CEF90231.1                       |
| Alternaria longipes dsRNA virus 1 (AIRV1)                        | YP_009052468.1                   |
| Ustilaginoidea virens unassigned RNA virus HNND 1 (UvURVHNND1)   | YP_009154708.1                   |
| Colletotrichum higginsianum non-segmented dsRNA virus 1 (ChNRV1) | YP_009177216.1                   |
| Trichoderma harzianum mycovirus 1 (ThV1)                         | AYU71188.1                       |
| Combu-like dsRNA virus 1 (CIV1)                                  | QAB47443.1                       |
| Penicillium miczynskii RNA virus 1 (PmRV1)                       | QDB74979.1                       |
| Fusarium culmorum virus 1 (FcV1)                                 | This study                       |
| <b>“USTIVIRUS”</b>   |                                  |
| Purpureocillium lilacinum nonsegmented virus 1 (PINV1)           | AOO52901.1                       |
| Ustilaginoidea virens nonsegmented virus 1 (UvNV-1)              | AIE77247.1                       |
| Nigrospora oryzae nonsegmented RNA virus 1 (NoNRV1)              | ALR87112.1                       |
| Ustilaginoidea virens nonsegmented virus 2 (UvNV-2)              | YP_009553681.1                   |
| <b>AMALGAVIRUS</b>   |                                  |
| Blueberry latent virus (BBLV)                                    | BBI01013.1                       |
| Rhododendron virus A (RhVA)                                      | YP_003868437.1                   |
| Southern tomato virus (STV)                                      | QDF44095.1                       |
| Vicia cryptic virus (VCV)  | YP_272125.1                      |
| Allium cepa amalgavirus 1 (AcAV1)                                | YP_009447920.1                   |
| Anthoxanthum odoratum amalgavirus 1 (AoAV1)                      | YP_009551563.1                   |
| Camellia oleifera amalgavirus 1 (CoAV1)                          | YP_009551565.1                   |
| Phalaenopsis equestris amalgavirus 1 (PeAV1)                     | YP_009552084.1                   |

**Tables S2.** RdRp-domain containing ORF.

|  | Accession number of RdRp-ORF |
|--|------------------------------|
| <b>“UNIRNAVIRIDAE”</b>   |                              |
| Penicillium janczewskii Beauveria bassiana-like virus 1 (PjBIV1) | ALO50135.1                   |
| Beauveria bassiana non-segmented virus 1 (BbNV1)                 | YP_009154711.1               |
| Alternaria longipes dsRNA virus 1 (AIRV1)                        | YP_009052469.1               |
| Ustilagoidea virens unassigned RNA virus HNND 1 (UvURVHNND1)     | YP_009154709.1               |
| Colletotrichum higginsianum non-segmented dsRNA virus 1 (ChNRV1) | AIW81425.1                   |
| Trichoderma harzianum mycovirus 1 (ThV1)                         | AYU71187.1                   |
| Combu-like dsRNA virus 1 (CIV1)                                  | QAB47444.1                   |
| Penicillium miczynskii RNA virus 1 (PmRV1)                       | QDB74980.1                   |
| Ustilagoidea virens RNA virus M (UvRVM)                          | YP_009094186.1               |
| Fusarium culmorum virus 1 (FcV1)                                 | This study                   |
| <b>“USTIVIRUS”</b>   |                              |
| Purpureocillium lilacinum nonsegmented virus 1 (PINV1)           | A0052902.1                   |
| Ustilagoidea virens nonsegmented virus 1 (UvNV-1)                | AIE77248.1                   |
| Nigrospora oryzae nonsegmented RNA virus 1 (NoNRV1)              | ALR87111.1                   |
| Ustilagoidea virens nonsegmented virus 2 (UvNV-2)                | AXR76113.1                   |
| <b>“AMALGAVIRIDAE”</b>   |                              |
| Blueberry latent virus (BBLV)                                    | Retrieved from NC_014593.1   |
| Rhododendron virus A (RhVA)                                      | Retrieved from NC_014481.1   |
| Southern tomato virus (STV)                                      | Retrieved from MG808383.1    |
| Zygosaccharomyces bailii virus Z (ZbVZ)                          | NP_624325.1                  |
| Antonospora locustae virus 1 (AnloV)                             | Retrieved from KX525322.1    |
| Beihai barnacle virus 14 (BbV14)                                 | APG78182.1                   |
| Hubei partiti-like virus 59 (HPLV59)                             | APG78262.1                   |
| <b>CTTV-like viruses</b>   |                              |
| Curvularia thermal tolerance virus (CTTV)                        | ALO61394.1                   |
| Cryphonectria parasitica bipartite mycovirus 1 (CpBMV)           | YP_007985675.1               |
| Penicillium aurantiogriseum bipartite virus 1 (PaBV1)            | YP_009182335.1               |
| Trichoderma harzianum bipartite mycovirus 1                      | YP_009553330.1               |
| <b>PARTITIVIRIDAE</b>  |                              |
| Fig cryptic virus (FCV)  | YP_004429258.1               |
| Cryptosporidium parvum virus 1 (CpV1)                            | AAC47805.1                   |
| Atkinsonella hypoxylon virus (AhV)                               | NP_604475.1                  |
| White clover cryptic virus 1 (WCCV)                              | YP_086754.1                  |
| <b>UNCLASSIFIED</b>  |                              |
| Bryopsis mitochondria-associated virus (BmaV)                    | BAA25883.1                   |
| Diatom colony-associated dsRNA virus 2 (DcaV2)                   | YP_009551448.1               |
| <b>TOTIVIRIDAE</b>   |                              |
| Giardia lamblia virus (GLV)                                      | Retrieved from NC_003555.1   |
| Leishmania RNA virus (LRV)                                       | Retrieved from NC_002064.1   |
| Saccharomyces cerevisiae virus L-A (ScVLA)                       | NP_620495.1                  |

**Table S3.** Description of *F. culmorum* strains screened for the presence of FcV1.

|    | Year | Country    | Place                       | Plant                 | Tissue | Code        |
|----|------|------------|-----------------------------|-----------------------|--------|-------------|
| 1  | 2010 | Italy      | Pozzo S. Nicola (Sassari)   | Wheat                 | Ear    | PVS-Fu 353  |
| 2  | 2009 | Italy      | Ottava (Sassari)            | Wheat                 | Ear    | PVS-Fu 368  |
| 3  | 2009 | Italy      | Ottava (Sassari)            | Wheat                 | Ear    | PVS-Fu 373  |
| 4  | 2001 | Italy      | Ussana (Cagliari)           | Wheat                 | Crown  | PVS-Fu 410  |
| 5  | 1972 | Belgium    | Nil-Saint-Vincent           | Barley                | Grain  | MUCL 18524  |
| 6  | 1980 | Finland    | -                           | Barley                | Grain  | MUCL 28166  |
| 7  | 1980 | Finland    | -                           | Barley                | Grain  | MUCL 28167  |
| 8  | 2002 | France     | -                           | Wheat                 | Grain  | MUCL 43772  |
| 9  | 1927 | Canada     | -                           | Avoine                | -      | MUCL 43791  |
| 10 | 1962 | Belgium    | Heverlee                    | <i>A. officinalis</i> | Stem   | MUCL 43792  |
| 11 | 1951 | Netherland | Lisse                       | Hyacinthus            | Root   | MUCL 43793  |
| 12 | 2002 | Belgium    | -                           | Wheat                 | Grain  | MUCL 43794  |
| 13 | 2002 | Belgium    | -                           | Wheat                 | Grain  | MUCL 43795  |
| 14 | 2002 | Belgium    | -                           | Wheat                 | Grain  | MUCL 43796  |
| 15 | 2002 | Belgium    | -                           | Wheat                 | Grain  | MUCL 43797  |
| 16 | 2002 | Belgium    | -                           | Wheat                 | Grain  | MUCL 43798  |
| 17 | 2011 | Belgium    | Koksijde                    | -                     | -      | 861         |
| 18 | 2011 | Belgium    | Verrebroek                  | Wheat                 | -      | 2723        |
| 19 | 2014 | Italy      | Agugliano (Ancona)          | Durum wheat           | Grain  | Culm1       |
| 20 | 2014 | Italy      | Agugliano (Ancona)          | Durum wheat           | Grain  | Culm2       |
| 21 | 2014 | Italy      | Agugliano (Ancona)          | Durum wheat           | Grain  | Culm3       |
| 22 | 2014 | Italy      | TorMancina (Rome)           | Durum wheat           | Crown  | ER 1998     |
| 23 | 1994 | Russia     | St. Petersburg              | Winter wheat          | -      | Russ 1.1.1  |
| 24 | 1994 | Russia     | St. Petersburg              | Winter wheat          | -      | Russ 4.1.1  |
| 25 | 1994 | Russia     | St. Petersburg              | Winter wheat          | -      | Russ 7.1.1  |
| 26 | 1994 | Russia     | St. Petersburg              | Winter wheat          | -      | Russ 23.1.1 |
| 27 | 2003 | Serbia     | Sremska Mitrovica           | Wheat                 | Grain  | MRIZP 209   |
| 28 | 2003 | Serbia     | Sremska Mitrovica           | Wheat                 | Grain  | MRIZP 210   |
| 29 | 1997 | Serbia     | Badince                     | Maize                 | Root   | MRIZP 1239  |
| 30 | 1997 | Serbia     | Badince                     | Maize                 | Root   | MRIZP 1318  |
| 31 | 2009 | Serbia     | Zemun Polje                 | Barley                | Grain  | MRIZP 2073  |
| 32 | 2003 | Serbia     | Sremska Mitrovica           | Wheat                 | Grain  | MRIZP 2830  |
| 33 | 2012 | Serbia     | Sremska Mitrovica           | Weed                  | Grain  | MRIZP 3762  |
| 34 |      | Turquey    | Eskisehir, central anatolia | <i>A. cylindrica</i>  | Root   | En23-2      |
| 35 | 1984 | Germany    | Wetze                       | Winter wheat          |        | FC 8        |
| 36 | 1984 | Germany    | Grünbach                    | Winter wheat          |        | FC 10       |
| 37 | 1987 | Germany    | Söllingen                   | Winter wheat          |        | FC 15       |
| 38 | 1991 | Germany    | Vaihingen                   | Emmer                 |        | FC 30       |
| 39 | 1993 | Portugal   | Luz                         | Winter durum          |        | FC 90       |
| 40 | 1995 | Portugal   | Luz                         | Wheat                 |        | FC 97       |
| 41 | 1987 | Netherland | Wageningen                  | -                     |        | FC 46       |
| 42 | 1952 | Netherland | -                           | Wheat                 | Grain  | FC 60       |
| 43 | 1997 | UK         | Louth                       | Wheat                 |        | F98/11      |
| 44 | 1998 | UK         | Barhill, Cambridge          | Wheat                 |        | F97/7       |
| 45 | 1998 | UK         | Hertfordshire               | Wheat                 |        | UK99        |
| 46 | 1984 | Poland     | Swadzim                     | Maize                 |        | KF 194      |
| 47 | 1986 | Poland     | Radzików                    | Wheat                 |        | KF 846      |
| 48 | 1986 | Poland     | Radzików                    | Maize                 |        | KF 915      |
| 49 | -    | NewZealand | -                           | Wheat                 |        | KF 2102     |
| 50 | -    | UK         | -                           | Wheat                 |        | KF 2104     |
| 51 | 2009 | Poland     | -                           | Wheat                 |        | KF 3852     |
| 52 | 2010 | Turquey    | Eskisehir, central anatolia | <i>T. aestivum</i>    | Root   | H010W21-2K  |
| 53 | 2014 | Turquey    | Tokat, northern anatolia    | <i>T. aestivum</i>    | Grain  | H014W9-2B   |