**Supplementary Table 1.** Summary of next generation sequencing results and contigs obtained

**Supplementary Table 2.** Genome organisation of sweet potato collusive virus isolates and other *Cavemovirus* members

Fig. 1

Diagram

Description automatically generated

Fig. 2



Supplementary Table 1. Summary of next generation sequencing results and contigs obtained

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Sample ID** | **QC1 (original samples and libraries)** | **No. of raw reads obtained** | **No. of contigs obtained** | **Contig length(s) (nt)** | **No. of reads mapping to contig(s)** | **Final sequence**  **length** |
| Alleys-Red (GRF0085) | PASS | 2,585,444 | 3 | 3,270  4,020  4,050 | 1,121 | 7,274 |
| Beni-Aka (GRF0096) | PASS | 2,279,642 | 1 | 10,857 | 3,439 | 7,712 |

**1**The quality and concentration of the original samples were determined with PicogreenTM (ThermoFisher Scientific, Australia) using a Victor3 fluorometer (PerkinElmer, Australia) and by gel electrophoresis. The NGS libraries were prepared using the Nextera XT DNA Library Preparation Kit (Illumina, Australia) and the quality and concentration of the libraries were determined using a Agilent Bioanalyzer 2100. Both the original samples and libraries passed the QC, and libraries were sequenced using the Illumina MiSeq platform.

Supplementary Table 2. Genome organisation of sweet potato collusive virus isolates and other *Cavemovirus* members

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **Virus sp.**  **(isolate)** | **Complete genome length (bp)** | **Size of predicted ORFs in bpa**  **(conserved protein domains)** | | | | |
|  |  | ORF 1  (CP/MP) | ORF 2  (Unknown) | ORF 3  (AP/RT/RH) | ORF 4  (IBP) | ORFa  (Unknown) |
| CsVMV | 8159 | 4119 | 216 | 1959 | 1179 | 165 |
| EpV-4 | 7296 | 3600 | n/a | 1959 | 1077 | 153 |
| ChiMV | 7775 | 3837 | n/a | 1953 | 1155 | 195 |
| SPCV (Mad1) | 7723 | 3795 | n/a | 1926 | 1197 | 150 |
| SPCV (Aus1) | 7712 | 3786 | n/a | 1926 | 1197 | 111 |
| SPCV (Aus2) | 7274 | 3345 | n/a | 1926 | 1197 | 111 |

**a**Numbering of ORFs follows the Cassava vein mosaic virus (CsVMV) genome organisation. EpV – Epiphyllum virus, ChiMV– Chicory mosaic cavemovirus, SPCV– sweet potato collusive virus, CP – coat protein, MP – movement protein, AP – aspartic protease, RT – reverse transcriptase, RH – ribonuclease H, IBP – inc