

Table S1. Primers used for the detection or the molecular characterization of the isolates of GaJV1 in the present study

Primer name	Sequence 5'-3'	Genome positions	Amplicon size (bp)	Annealing T°
RACE primers				
GaJV-1 RNA1-3'Race	TGTTCCCTTGTYAAACCCGATCACGTGGC	3523-3550	550	70°C
GaJV-1 RNA2-3'Race	GTGTCYTTTTTCGGATCGCGTGGC	2987-3013	244	70°C
GaJV-1 RNA3-3'Race	CGCAACTTACGTATGATYTGATTGGCC	1738-1765	402	70°C
GaJV-1 RNA4-3'Race	CCGCTTCTTTGCGTAAATTGCTGTCACG	1852-1879	158	70°C
GaJV-1 RNA5-3'Race	TGTTGGGCGTGGCTCTGCTTGGTCGCG	1642-1668	220	70°C
GaJV-1 RNA6-3'Race	GAAGGTGTGTAGTGTGGAATTCTGTGCG	1370-1397	294	70°C
GaJV-1 RNA7-3'Race	CGAAGGTCCCGATTTTGATTCTGTGCG	1175-1201	475	70°C
GaJV-1 RNA8-3'Race	AAGCTTGGTGGGGTCAATAATTGGTCGCG	951-979	912	70°C
GaJV-1 RNA9-3'Race	CTGCTGGCGCTTCTGATCGTCTTATGC	1373-1347	308	70°C
GaJV-1 RNA1-5'Race	CATCTTGGAAATCAACAACATGAGGTACC	353-326	353	70°C
GaJV-1 RNA2-5'Race	GCAACATCTCAGCAAATTCAGCAGTACTA	179-151	179	70°C
GaJV-1 RNA3-5'Race	CGAGCATCTTGTGTCTGAACCTCTATGG	256-229	256	70°C
GaJV-1 RNA4-5'Race	CAAACCTCGAATCATCAACAACACAGGCC	196-168	196	70°C
GaJV-1 RNA5-5'Race	CCATGCGCGCAAACCCAAACCCGAACG	428-401	428	70°C
GaJV-1 RNA6-5'Race	CGAGCTGACAAAACCGGAACGTTGGTGG	462-435	462	70°C
GaJV-1 RNA7-5'Race	CCCAGTAGGTGAACTCAATAAAGAGGAC	353-326	353	70°C
GaJV-1 RNA8-5'Race	CGCAAGAATTAGGCTTAATGCAAGAAA	270-244	270	70°C
GaJV-1 RNA9-5'Race	CTATCTCCAAACACGTTGACTTCATCGGG	300-272	300	70°C
Gap filling primers				
CVJ-i31-RNA5-trou-F	CTTCCAGTGAAGGCTGGCG	942-961	864	60°C
CVJ-i31-RNA5-trou-R	TTTAATCGTCAACCGGAGAAAAC	1806-1787		
3'polyA anchored PCR				
LD-polyT	CACTGGCGGCCGCTCGAGCATGTACT ₂₅ NN			70°C
LD-prim	CACTGGCGGCCGCTCGAGCATGTAC			
Detection primers				
RNA1-CVJ-likeF	GGAATCAAATCTATGGAAGTTG	1191-1212	565	56°C
RNA1-CVJ-likeR	CCGAAAGATCATGCAAATCACC	1755-1734		
RNA2-CVJ-likeF	TGTTTCGTTGCCCTTCCCTTG	1201-1220	747	56°C
RNA2-CVJ-likeR	GCATCCAGCAAAGGTGTGTTA	1947-1927		
RNA3-CVJ-likeF	ACGTTGGAGGATGCGAAAGG	169-188	269	56°C
RNA3-CVJ-likeR	CCAAGCATCAAACGGTGACG	437-418		
RNA4-CVJ-likeF	CCGGTTTGTGCTATGCTCG	530-548	346	56°C
RNA4-CVJ-likeR	CCAGACGCACCACCAATACA	875-856		
RNA5-CVJ-likeF	GGTATGCATTCGTCTAGGTC	250-269	898	56°C
RNA5-CVJ-likeR	CCTCCTTCCAAACCAACGCT	1147-1128		
RNA6-CVJ-likeF	GTTTTCGTTGCTCGTCTCC	357-375	486	56°C
RNA6-CVJ-likeR	GTCCTCGCTTAACATCTTCGT	842-822		
RNA7-CVJ-likeF	GTTCTATGGGTAAGGAAATGTC	757-778	444	56°C
RNA7-CVJ-likeR	GCACAGAATCAAATCGGGAC	1200-1180		
RNA8-CVJ-likeF	CTGGTGGTGTGCTCGTCCG	439-456	199	56°C
RNA8-CVJ-likeR	CACAAGCCGTCTCAACAGG	637-618		
RNA9-CVJ-likeF	TAAGGCCGGTGTATTCGTGC	328-347	429	56°C
RNA9-CVJ-likeR	GCACCAACAACACGCTTACG	756-737		

A)

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RNA1  -----CACCTACCCAAACGAAAC-----GAAACGAAACGAAACGAAACGAAACAAAAGAAAGCAATT
RNA2  ATTTTGCCTTACTGGACACCTACCCAAACGAAAC-----GAAACGAAACGAAACCGAAACCGAAAAGAAAAGAAACGACAT
RNA3  -----CACGAAAC-----GAAACGAAACGAAACCGAAAAGAACAGAACCGAGCACTAAG
RNA A  ----AGCCTTACTGGACACCTACCCAAACGAAAC-----GAAACGAAACGAAACAAACGAAACAGAAACAGAAAATAAAT
RNA B  -----TACTGGACACCTACCGAAACGAAAA-----GAAACGAAACGAAACGAAACGAAACGAAACGAAATAAAGCAACC
RNA C  -----AACTGGACACCTACCTAAAATAAAC-----GAAACGAAACGAAACGAAACCGAAACGAAACGAAACTAAGT
RNA9  TTTGTATCTTACTGGACACCTACCGAAACGAAAACAACC-----GAAACGAAACGAAACGAAACGAAACAAAAGAAATTTGGTCAGAC
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B)

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RNA1  TA-----AT-GTTGGTCGTC-CTGTACGTT-CGTGTACAGGTTGGTG--TTA--TTCACCTTACAGCGATAG--
RNA2  TA--GTTCATTA-AATTTTTATTGTTGGTCGTCTCATTCCGTT-CGCGAGTGAGTTGGTG--TTA-CACCAT-----GCGCGC--
RNA3  TA--GTTCATAATATTTTT-AACGTTGATCGTC-CC-GTGCCTGCGTGCATGGGTCTATGGG-----
RNA A  TATTGTTTATTATGTTTTT-ATTGTTGATCGCC-CTTTGGATTTCTGTCAGGGGCTTTTGGGTTA--CCCATTGAGAGCGATA--
RNA B  TATTGTTTATTATGTTTTT-ATTGTTGATCGCC-CCTTGGATTTCTGTCAGGGGCTTTTGGGTTA--CCCATTGAGAGCGCTA--
RNA C  TAT-GTTCATTATGTTTTT-ATCGTTGGTTGCC-CTTTGAAGTTCTGTTCCAGAGGTCGTTGAGTTATCTCAAC-GAGAGCAACAGA
RNA D  TATTGTTTATTATGTTTTT ATTGTTGATCGCC-CTTTGGATTTCTGTCAGGGGGCTTTGGGTTT-CCCATTGAGAGCG-----
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Figure S1. Multiple nucleotide sequence alignments of A) the 5' non coding region (NCR) and B) the 3' NCR of the contig assembled using the sequence data of SRA SRX3209419 for the various genomic segments identified for *Carya*-associated jivivirus 1 (CaJV-1). Residues conserved in all RNA segments are highlighted in yellow.

A)

GaJV-2 P3 CFYDMCSLAGVEVPFGVTRVADLDEDAMSALAAKRFKVLRLRAYSSINDPRNHVELVRNDATNFKSYIRGPFDFLEQDFYYLVCTSTLHFFNKGNEWKSFHFFS
GaJV-1 P9 CLARACGKAGVFPYNIIRRVADMSKSALTTL SAMKGFKVLVKAYSQ-KDKRNHIELIGNEAGNFLSKITFPESGGVDDHVL SVITMQHFFNSSNQWASHKFFYA
CaJV-1 P9 CFSLACRAAGVNVPHVRSVRDMDRDMVAMAAKP-FKVAFVVYAA-DDSRNHVELVPANATNALVHVKPV TSTSHHHRVFVCTTVQQFFNKG NQWAGYVFFYA
CaJV-2 P9 CFARACRLAGVEVPGIATSVDQLRGDDVTKLSESLDFKVVVTCFGA-DDPRNHIDLVP SGTSNALVSVKPIDVIAQRHYVFACTTMQQFFNKG NRWYHTKFFYA

B)

GaJV-1 P9 APGSI RAESV-SGGSANIGGGVSRPRKRVVGA KSGLMFGTAGV NKNYRTTGAILFNNAEELFQDSISR TYAQEIIEEVFDTWGVPM DQPEAATYAENLLWTFI
CaJV-1 P9 APESI VEDHVRSGGS-NVSGGVRSRKRVIPARSTALDG--PVVKNYRTTNAVLFN MVGELFQDSISR EYAAQIIEEDLFETWGVPLDQPD AVKYAEDLLWSFL
CaJV-2 P9 PPEISV GDDVTGGGS-NVSGGVRSRRRNISAR-ITAVG-VPVAKNYRTTGAVMFNNFDEL FQDKVSRPFAQEIIEATFEAWGVPLDQPD AVKFAEDLLWSFI

VAVTASNKADYNRTYDIPVRPIERNGESVTSVEADFSIFSRILEAKFGITRRQFSRGVADDLRNFLRH DENQALLPTLATRVGCEPLMAYLAFD GSTHCTGLT
VSVTASNKADYNRVFDVPVKPIDRGSESVTEVEADFSKLSVLLASKYGLTRRQFARGVADDLRAFLKLEENQLI LPQLATRIGCEPLLAYLAFD GSTHCSNMT
VAVTASNKADYNRVYDIPVRAIKRGGETLNSVDADFVFSKLLLEFQFGVTRRQFARGVSDDLKDFLRRE ENQALLPTLATRVGCEPLLAYLAFD GSTHCTGLT

TREAAFTRTLEQRNLFERDDENAAGASDRLMQFSGSVRSVQPR*
SRETTFTKTLESRNLFERDDVVAQGASDRLMQMSSGVRAVSSR*
TREVTFTRTLESRNLFERDDVLAQGS SDRLMQVSSGVRSVSVR*

Figure S2. Multiple protein sequence alignments of A) the conserved domain between the P9 proteins of GaJV-1, CaJV-1 and CaJV-2 and the P3 protein of GaJV-2 (MN520750) and B) the C-terminal region of the P9 proteins of GaJV-1, CaJV-1 and CaJV-2. Residues conserved in all proteins are highlighted in yellow.

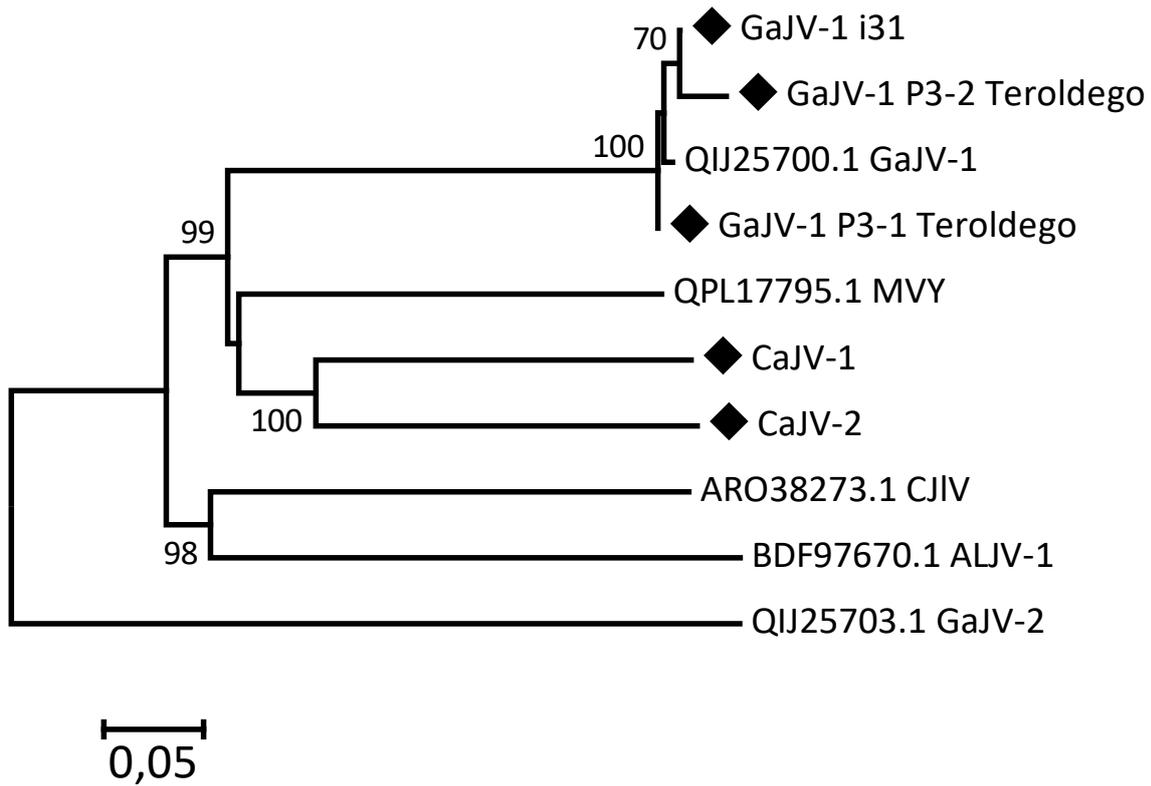


Figure S3. Phylogenetic tree reconstructed from the sequences of the P3 proteins of GaJV-1, CaJV-1, CaJV-2 and selected related agents. The tree was reconstructed using the neighbor-joining method and strict amino acid distances. Branch validity was evaluated by bootstrap analysis (1,000 replicates) and only bootstrap values >70% are shown. Sequences determined here are marked by a black diamond. The scale bar represents 5% aa divergence. GaJV-1 (or -2): grapevine-associated jivivirus 1 (or -2); CaJV-1 (or -2): *Carya*-associated jivivirus 1 (or -2); CJIV: Citrus jingmen-like virus; MVY; Mastic virus Y; ALJV-1: *Aspergillus lentulus* jivivirus 1.

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>GaJV-1 GITRRQFSRGVADDLRNFLRH DENQALLPTLATRVGCEPLMAYLAFDGS!THCTGLTTREAAFT!TRTLE!QRNLFERDDENAAGAS!DRLMQGFSGSVRSVQ!PR
>CaJV-1 GLTRRQFARGVADDLRAFLKLEENQLILPQLATRIGCEPLLAYLAFDGS!THCSNM!TSRETTFT!TKTLES!RNLFERDDVVAQGAS!DRLMQGMSSG!GVRAVSS!R
>CaJV-2 GVTRRQFARGVSDDLKDFLRREENQALLPTLATRVGCEPLLAYLAFDGS!THCTGLTTREVTFT!TRTLES!RNLFERDDVLAQGS!SDRLMQGVSGG!VRSVSV!R
>Gleditsia sinensis GLTRRQFARGVADDLRTYLKLPENQPLLKPLATRIGCEPLLAC!LAFDGS!THCTGLTTRETTFT!TKTLES!RNLFERDDVVAQGAS!DRLMQGMSSG!GVRAVSS!R
>Ginkgo biloba GVTRRQFARAVADDLRAFLKKEENQAMLPVIATRVGCEPLLAYLAFDGS!THCTGMT!TREAAFT!TKTLES!RNLFEDDSLMGAGAS!DKL!FQGF-----
>Bletilla striata EVTRRRFARAIADDVRKFIMEPNNVRLREMLVTELG!VKSEYAGLAFDGS!THCSGM!STNQVMFT!KELERMNLF!DEQKVRDKMAS!NQQLATAGFQVNARRGAYN
>Cenostigma pyramidale GITRRRFSRGVANDLRDFLRHPENQFMLPELATRVGCDP!QLAHLAFDGS!THCSGMT!SREVAFT!TKTLES!RNLFEREDVLAQ!GASGKLMQGVVE-SRSV!VPR
>Selaginella lepidophylla GVTRRQFARAVADDVRVYLMHVENVHLLPELARRAGCDP!QMATLVFDGS!THCSGLT!SQEITFT!TKLQARNLF!EDDSVLADDASARLMQGS!VGGARS!VPR
>Ginkgo biloba GVTRRQFARAVADDLRSFLKKEENQAMLP!L!IATRVGCEPLLAYLAFDGS!THCTGMT!TREAAFT!TKTLES!RNLFEDDSVMGV!GASDRL!FQGFSGG!PRSVV!PR
>Lumnitzera littorea GVTRRN!FARGVADDLRAYLN!RTE!NQFVK!T!KSAA!RIYAD!PQY!GDLS!FDGS!TGCTGMT!T!SQQR!FT!KL!LED!RNLY!ERAD!V!RAD!GAS!DI!LMQGI!HGGS!RSV!VQR
>Ilex paraguariensis GITRRNFARGVANDIRGYLNRPENQFVKS!SAER!IYAD!PQY!GSLS!FDGS!TGCLGLT!SSER!KFT!KL!LED!RNLY!ERAD!L-----
>Viola albida GKTRRQFARAIADDQKNFLRHEENKPLL!PRLATRVGCE!TLLAYLS!FDGSTP-----
>Tectona grandis GVTRRQFARGMADDMRAYIKDPDN!THLRPKLADRAGCDP!QMAELAFDGS!THCTGLT!SAQLT!FT!RL!LES!RNLFEDDAVLSQ!GTSQ!TIME!GIHGHVRSK!VQ-
>Viola orientalis GITRRNFARGVADDLRSYLQREGNQFIVSRISQ!RVGAD!PQMG!TLC!FDGS!TNCTGLT!TSEL!TFT!TKV!LEGRNLFERDDVIAEGAS!GR!L!FQGMSSG!GVRSV!VPR
>Phalaenopsis aphrodite GITRRNFSCGIADDQRRFLQRPENTHLLPVLATRVGCDP!QFATLAFDGS!THCTGLT!SREVG!FT!KT!LKVRNLFESDEMLAPGAS!DKL!LQMPAG!VRSV!VPR
>Iris domestica GITRRNFSCGIADDQRRFLQRPENTHLLPLLATRVGCDP!QFATLAFDGS!THCTGMT!SREVG!FT!KT!LKVRNLFESDEMLAPGAS!DKL!LQMPAG!VRSV!VPR
>Persea americana -----ITAAGEENQHILPTLATRIGCEPLMAYLAFDGS!THCDNLT!TREVTFT!TKTLES!RNLFERDDVLAQGS!SDRLMQGMSSG!GVRSV!VAPR
>Mangifera indica GVTRRN!FARGAAD!FMRN!FLSR!PEN!Q!VK!VLA!AQ!RVGAD!PQY!GALCFDGS!TGCSN!LSS!VH!QK!FCAL!LEGRNLYEREDLIAEGAS!DKLMEGIHGS!VRSV!VAPR
>Mangifera indica GITRRNF!SRAIS!DDL!REYL!NRSE!NQ!FI!KS!SA!QRIGAD!PQF!GALCFDGS!THCSN!LTS!SEST!FT!RY!LES!RNLYERADVIAEGAS!DALMQGLHGG!VRSV!VPR
>Cenostigma pyramidale GISRRNFARGIADNLRAYLRRDENQH!LKSL!SA!QRIGAD!PQMGDMCFDGS!TGCTSL!T!SSEAS!FARL!LEARNLYERDDVIAEGAS!DKL!MQGMSSG!GVRSI!VPR
>Aquilaria malaccensis GVTRRQLARGLANDFRFLKQEENKYLLPILATRIGCDP!QYAH!LAFDGS!THCSGMT!SREIAFT!TKI!LES!RNLFEDEAVLAAGAS!DRLMNGV!STSRASK!VPR
>Vriesea carinata GVTRRQFARAVADDQHGYIRNEANKFLLPILATRIGCDP!QYAH!LAFDGS!THCSGMT!SREMT!FT!TRTLES!RNLFEDESVLAAGAS!ERLMDG!PRVGVSS!KVPR
>Bambusa oldhamii GVTRRQFARAIADDMRTFIKDPENIHLLPRLASRVGCDP!QMASL!GFDGS!THCSN!LTTAELS!FT!KL!LEN!RNLFEDDSLLAEGAS!QRLMQGMSSG!PRSI!ISR
>Sarcandra glabra GVTRRQFARALADDQRDFLR!LPDN!KFLL!P!LATRVGCDP!QYAH!LAFDGS!THCTNLT!SREVS!FT!KT!LES!RNLFEDESI!LAAGAS!DTLMNG!PRVGVSS!KVPR
>Ardisia crenata SVTRRQFARGIADALHRYLKQPENAHLLPNLATRVGCDNQLASFAFDGS!THCTGMT!SME!MR!FT!RL!LETRNLFEDDAVLANGAS!DRLMQGMSSG!ARS!VQTR
>Juniperus ashei GVTRRQFARAVADDLRDY!LKHE!ENQYMLPILATRIGCESLLSDLA!FDGS!THCTGLT!TROVA!FT!KT!LES!RNLFERDDVVAQ!GASERLMQGFSGG!VRSI!APR

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Figure S4. Multiple protein sequence alignments of the C-terminal conserved domain of the P9 proteins of GaJV-1, CaJV-1 and CaJV-2 and of proteins encoded by contigs identified by TBLASTN analysis in the transcriptome assembly of various plant species. Residues conserved in all proteins are highlighted in green and an asterisk above the alignment. Residues conserved in >80% of proteins are highlighted in yellow and a ! sign above the alignment. For the various plant species, the contigs used are: *Gleditsia sinensis* (GCKC01203879.1 and GCKC01201897.1); *Ginkgo biloba* (GHLL01078026.1 and GHLL01124537.1); *Bletilla striata* (GGUU01098164.1); *Cenostigma pyramidale* (GIYP01145516.1); *Selaginella lepidophylla* (GIMG01058596.1); *Lumnitzera littorea* (GGFO01008820.1); *Ilex paraguariensis* (GEWR01020459.1); *Viola albida* (GFWC01055794.1); *V. orientalis* (GFXR01028129.1); *Persea americana* (GHOF01010909.1 and GHOF01010909.1); *Tectona grandis* (GFG01021602.1); *Phalaenopsis aphrodite* (JI811267.1); *Iris domestica* (GGPC01141670.1); *Mangifera indica* (HOG01045463.1 and GHOG01041455.1); *Cenostigma pyramidale* (GIYP01566055.1); *Aquilaria malaccensis* (GGSI01128087.1); *Vriesea carinata* (GHCB01019885.1); *Bambusa oldhamii* (GJPT01309189.1); *Sarcandra glabra* (GJAT01069010.1); *Ardisia crenata* (GJZC01035951.1) and *Juniperus ashei* (GEWT01000925.1).