# A lineage of begomoviruses encode Rep and AC4 proteins of enigmatic ancestry: hints on the evolution of geminiviruses in the New World.

Iliana Torres-Herrera[1*], Angélica Romero-Osorio[1*], Oscar Moreno-Valenzuela[2], Guillermo Pastor Palacios[3], Yair Cardenas-Conejo[4], Jorge H. Ramírez-Prado[2], Lina Riego-Ruiz[1], Salvador Ambriz-Granados[1], Gerardo R. Argüello-Astorga[1&].

**Supplementary Table 1. Oligonucleotides used in this work.**

## Table S1

| Oligonucleotide | Sequence 5'- 3' |
|---|---|
| CP-YMAC-Rev | TTWGASGCATGNGTACATGCCA |
| CP-EGP70-For | GGTTGTGAAGGNCCNTGTAAGGTYCA |
| Rep-SL2150-For | GACGGCRTTGGYGTCTTTGGCWGC |
| Rep-SL2370-Rev | CTGYCRTGGTCAGTCGTCAAACC |
| BC1- 290-For | GAGAARTAGTGGAGATCTATGTTRCAYCT |
| BVI-310-Rev | CAATYTTRACNGTACCYTTRAAACG |
| BV1-310 For | TTYAAGGGTACCGTTAAGATTG |
| BC1-290 Rev | CCSATMAGRTGYAACATAGATCTCC |
| BC1-DLH- For | GGAAGCTGARAARTAGTGGAGATCTATG |
| BC1- PWK-For | TCGCAAACTCKGTAATAGAGTTTCCATGG |
| BV1-GATP- Rev | TTRGGGGTAGMACCGTCMATGTTCATATC |
| BV1- MSKA-Rev | CGCCTTCGACATMGTRTCWGACATCCAAC |
| JacA-Bam HI-For | ACT**GGATCC**CCTGCCTTAATGATTGC |
| JacA- Bam HI Rev | TTA**GGATCC**AGTAAGATGGATAACC |
| JacB–Hind I–For | TAT**AAGCTT**TCTCTCCCATCTCCCGT |
| JacB– Hind I Rev | AGA**AAGCTT**ATCAGATGCGCATCCATG |
| CapA-Bst XI-For | TAC**CCA**TCGTGT**TGG**TAAGCGTTTCTGC |
| CapA- Bst XI- Rev | TTA**CCA**ACACGA**TGG**GTAATGCCATTGC |
| CapB Sal I-For | ACT**GTCGA**CAGCTTTAACTTTCCTTTG |
| CapB-Sal I-Rev | TCT**GTCGAC**AGCTAAGCACTCTGTAG |
| VignaA-BamHI-For | AT**GGATCC**TCTATCCTGTATATC |
| VignaA BamHI-Rev | AGA**GGATCC**AATATACACAAGGA |
| VignaB-KpnI-For | TA**GGTACC**GTCAAGATTGAGCGTGTAC |
| VignaB-KpnI-Rev | TT**GGTACC**CTTGAAACGGAGTCG |