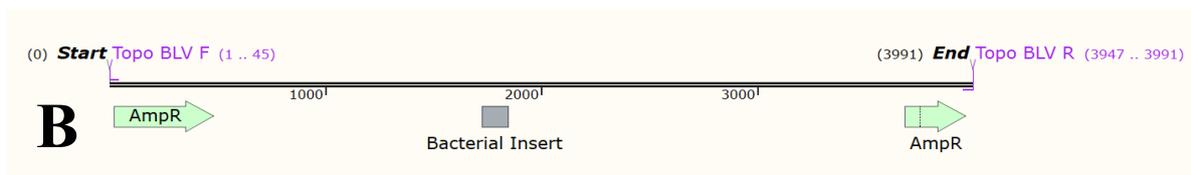
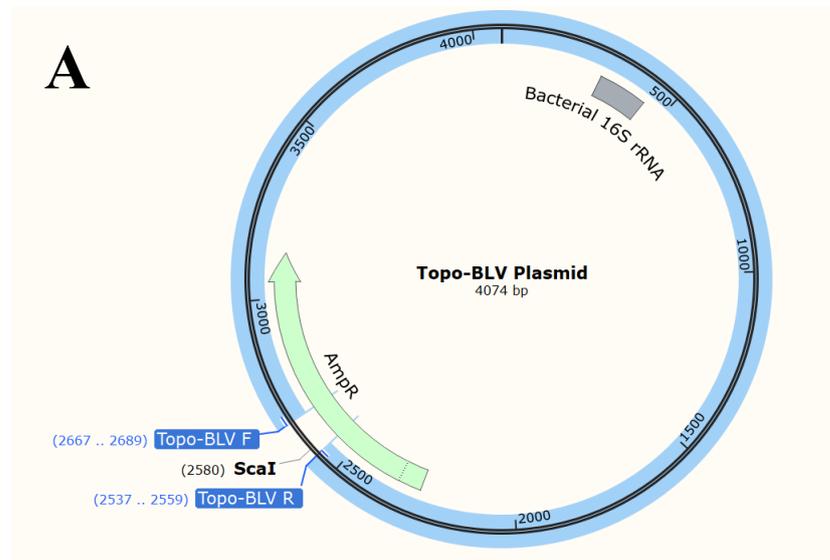
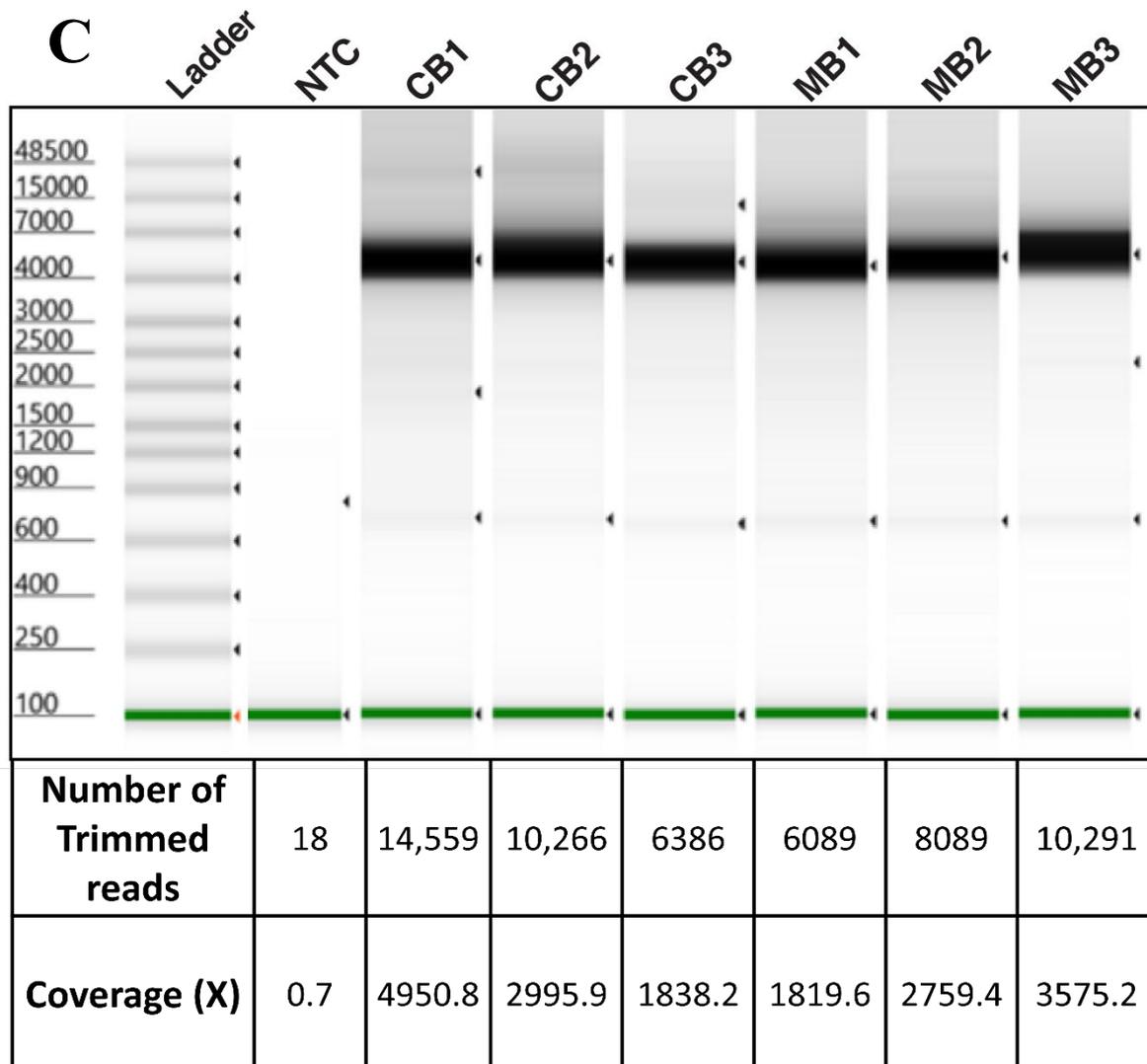


Supplementary Materials:





**Figure S1:** (A): Map of the TOPO® vector used with *Corynebacterium bovis* and *Mycoplasma bovis* inserts. (B): Primary amplicon of Table 1. used as a template for controls. Amplicon contains BLV seed sequence for use as a positive control in the BLV PCR. (C): Electrophoretogram showing the amplification, size, and integrity of TOPO® plasmids encoding the 16s rDNA gene and Thioredoxin gene from two different pathogens, respectively, used for Oxford Nanopore Sequencing. These amplicons were generated using the BLV\_CS primers before sequencing. (CB: *Corynebacterium bovis*; MB- *Mycoplasma bovis*; NTC: Non-Template Control). NTC: Non-template Control.

```

          10      20      30      40      50      60      70      80      90      100     110     120
Consensus  CAKSPRYTLD SVNGYPKIYW PPPQRRRFG ARAMVTYDCE PRCYPVGADR FDCPHWDNAS QADQGSFYVN HQILFLHLKQ CHGIFTLTWE IWGYDPLITF SLHKIPDPPQ PDFPQLNSDW
AP019598  .....
Dam 1_CS  .....
Dam 3_CS  .....
Daughter 3_CS .....
Dam 2_CS  .....
Daughter 2_CS .....
Dam 6_CS  .....
Dam 7_CS  .....
Daughter 4_CS .....
Daughter 8_CS .....
Daughter 1_CS .....
Daughter 6_CS .....
Daughter 7_CS .....
Daughter 5_CS .....
Dam 5_CS  .....
Dam 4_CS  .....

          130     140     150     160     170     180     190
Consensus  VPSVRSWALL LNQTARAFPD CAICWEPSPP WAPEILVYNK TISSSGPGLA LPDAQIFWVN TSSFNTTQGW HHPSQRL
AP019598  .....
Dam 1_CS  .....
Dam 3_CS  .....
Daughter 3_CS .....
Dam 2_CS  .....
Daughter 2_CS .....
Dam 6_CS  .....
Dam 7_CS  .....
Daughter 4_CS .....
Daughter 8_CS .....
Daughter 1_CS .....
Daughter 6_CS .....
Daughter 7_CS .....
Daughter 5_CS .....
Dam 5_CS  .....
Dam 4_CS  .....

```

**Figure S2.** Amino acid alignment of the ENV protein showing 100% identity between the animals studied. Only sequences derived from BLV amplicons generated by CentralStar Laboratories were used for this analysis. AP019598 is the Genbank accession number of the reference genome used for comparison.