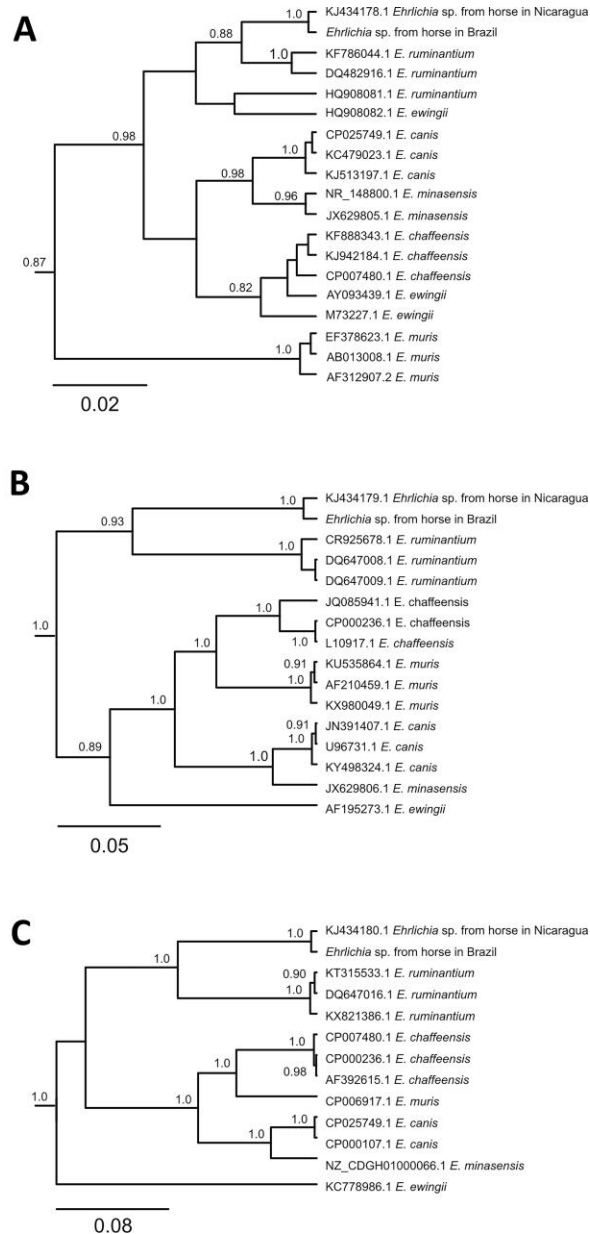


Potentially Same Novel *Ehrlichia* Species in Horses in Nicaragua and Brazil

Technical Appendix



Technical Appendix Figure 1. Phylogenetic analysis of gene fragments of *Ehrlichia* isolates found in horses in Nicaragua and Brazil compared with reference strains. Trees were constructed by using 181 bp of 16S rDNA (A), 561 bp of *groEL* (B), and 579 bp of *sodB* (C) genes.

A

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      10      20      30      40      50
KJ434179.1 Ehrlichia sp. from horse in Nicaragua Y L S P S I L D Y H Y G K H H Q G Y V N A L N N L V M G T N F S D Y T N E D L P T V I K A T H G N L
Ehrlichia sp. from horse in Brazil V
CR925678.1 E. ruminantium . . . . . A N V . N . . . . . A . . . . . D . C T C . . . . . A . . . . . S D .

      60      70      80      90     100
KJ434179.1 Ehrlichia sp. from horse in Nicaragua E T R S I F N N A G Q V W H N F Y W Q S I K K N G G G V P V X K L L D M I N K D F G D I N K F N Y
Ehrlichia sp. from horse in Brazil E
CR925678.1 E. ruminantium A . . . . . T . . . . . V V T . K G E . . . . . R . . . . . E S V E . . . . . N

      110     120     130
KJ434179.1 Ehrlichia sp. from horse in Nicaragua A F T E A G K S H F G S G W V W L V F D F T E Q K L K I L C T A N G D T P
Ehrlichia sp. from horse in Brazil
CR925678.1 E. ruminantium . . . . . G . . . . . T V . . . . .

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B

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      10      20      30      40      50
KJ434179.1 Ehrlichia sp. from horse in Nicaragua R G Y L S P Y F V T N S E K M L V E F E N P Y I L L T E K K L N I I Q P I L P I L E N V A R S G R P
Ehrlichia sp. from horse in Brazil
CR925678.1 E. ruminantium . . . . . L . . . . . I . . . . .

      60      70      80      90     100
KJ434179.1 Ehrlichia sp. from horse in Nicaragua L L I I A E D V E G E A L S T L V L N K L R G G L H V A A V K A P G F G D R R K D M L G D I A I L T
Ehrlichia sp. from horse in Brazil
CR925678.1 E. ruminantium . . . . .

      110     120     130     140     150
KJ434179.1 Ehrlichia sp. from horse in Nicaragua G A K H V I N D E L A I K M E D L T L A E L G T A K N I R I T K D T T I I G S V D N S A A N V Q S
Ehrlichia sp. from horse in Brazil
CR925678.1 E. ruminantium . . . . . C D . . . . . C . H . . . . .

      160     170     180     190
KJ434179.1 Ehrlichia sp. from horse in Nicaragua R I S Q I K M Q I E N S T S D Y D K E K L R E R L A K L S G G V A V L K V G G S S E V E
Ehrlichia sp. from horse in Brazil
CR925678.1 E. ruminantium . . . . . C . R . . . . . D . . . . . Q . . . . .

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Technical Appendix Figure 2. Alignment of partial amino acid sequences of *Ehrlichia* isolates found in horses, Nicaragua and Brazil. *E. ruminantium* was used as the reference strain in sodB (A) and groEL (B) sequence alignments.