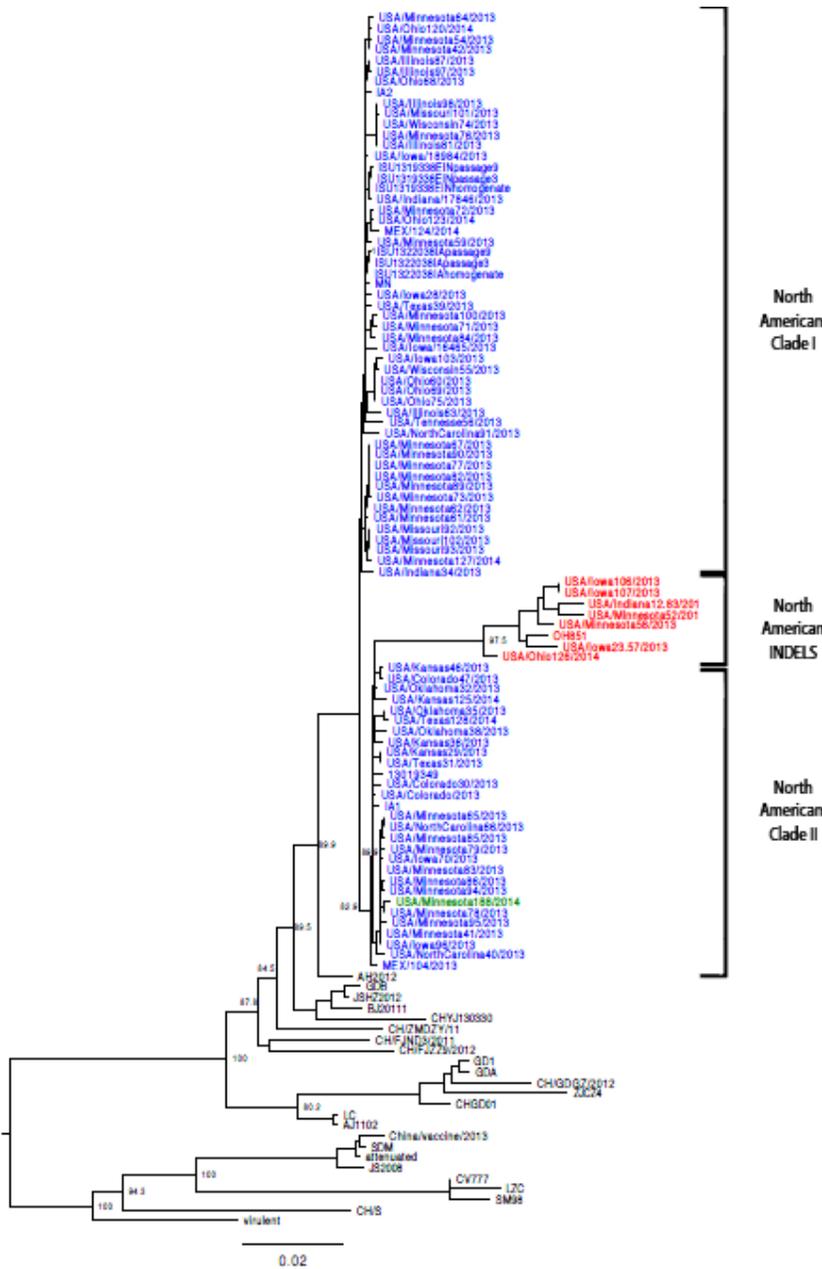




### Results



**Figure 2** Complete genome phylogenetic tree of 114 PEDV strains. Strains colored blue represent US prototype strains, strains colored red represent INDEL strains, and the color green represents the newly identified S2aa-del strain.

### Conclusions

- Thus far, three natural occurring American PEDV strains have been identified, the original PEDV, the PEDV with changes in the spike gene (INDEL), and the PEDV strain (S2aa-del).
- The significance of genetic changes in the American PEDV strains to clinical disease is not yet known.
- It is also unknown if the PEDV 6nt-del strain will circulate in the North American swine population.

### Implications

- Documenting PEDV variation is important to understand the natural evolution of the virus and possibly identify portions of the genome associated with difference clinical disease presentation.
- Animal studies are required to define the effect these mutations have on clinical disease, pathogenesis, and immunity and to understand how sow exposure to a different PEDV virus correlates to protection of piglets from clinical disease.