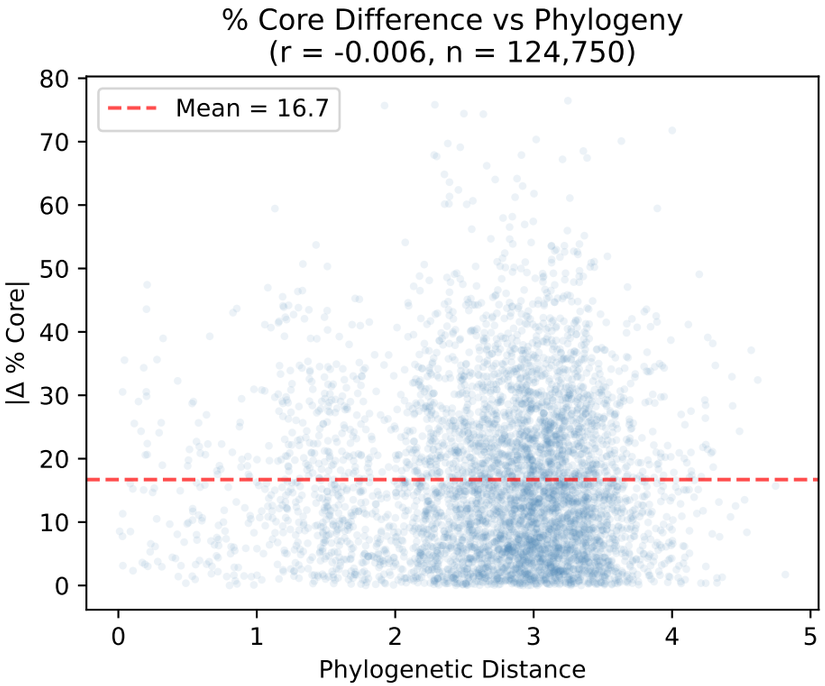
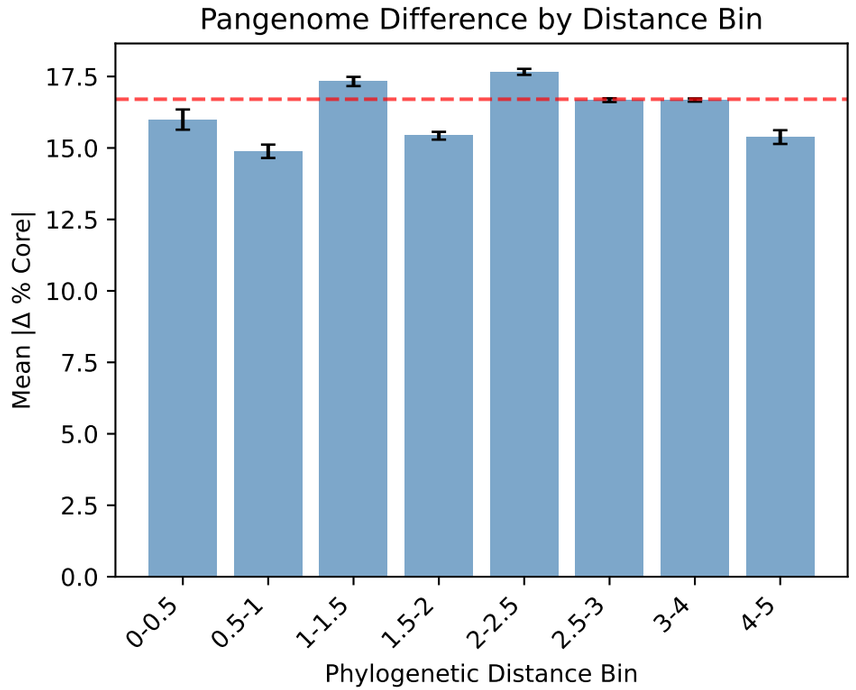
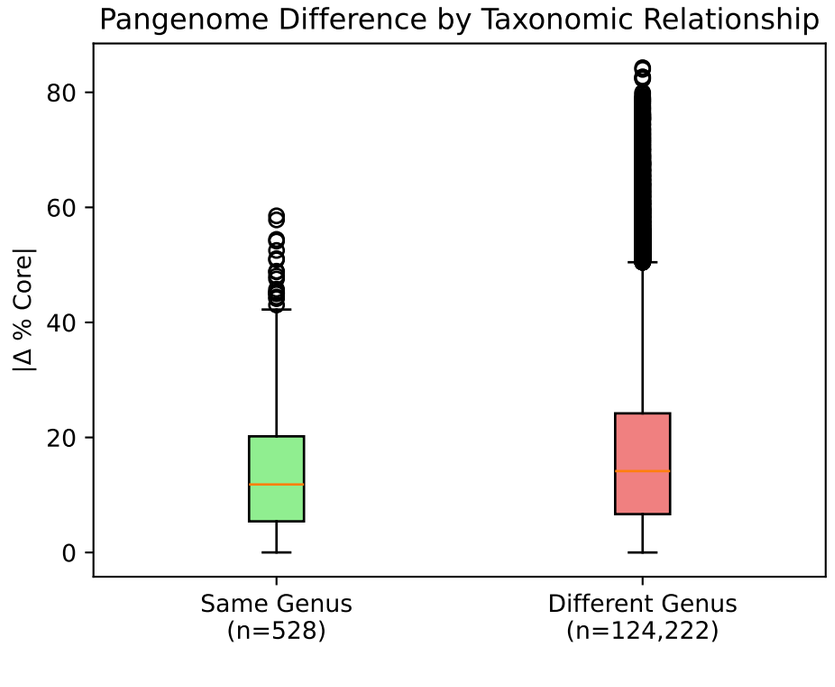
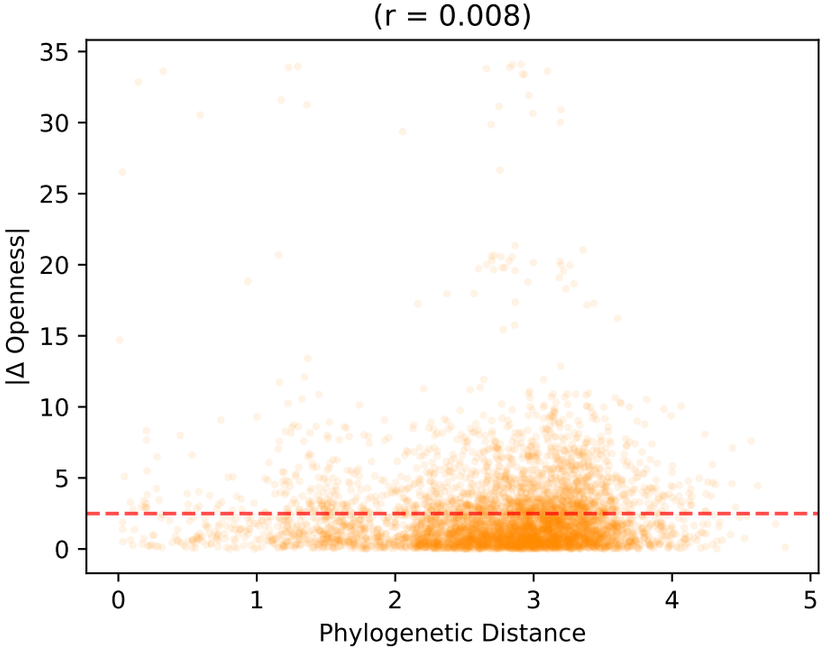
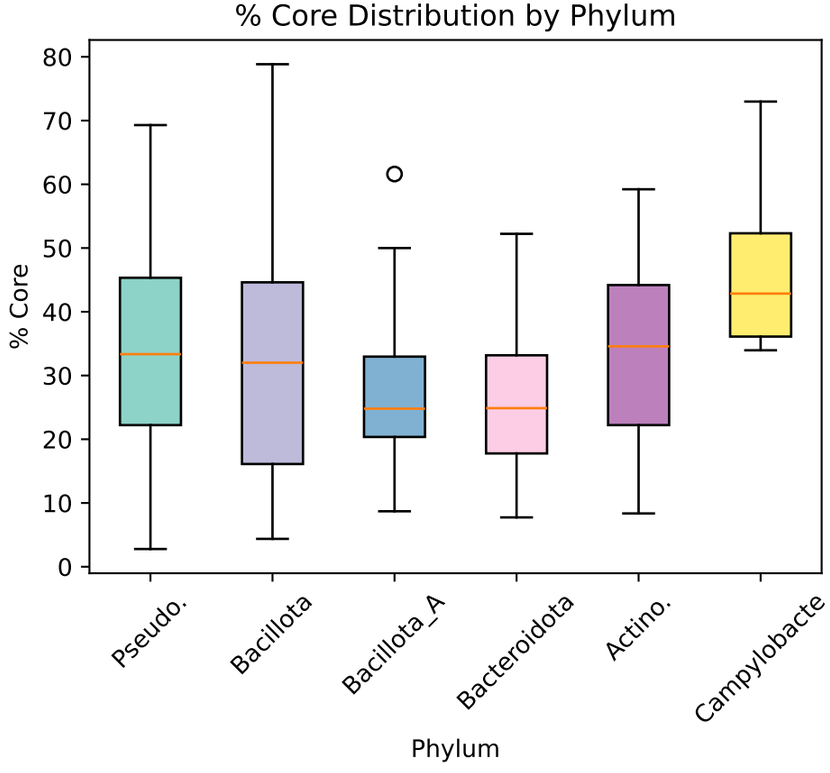
# Phylogeny vs Pangenome Structure: Species-Level Analysis




KEY FINDINGS

1. No correlation between phylogeny and pangenome structure
   - r = 0.006 for % core
   - r = 0.008 for openness

2. Same-genus species are NOT more similar in pangenome structure
   - Same genus: Δ%core = 14.6
   - Diff genus: Δ%core = 16.7

3. Pangenome structure differences are CONSTANT across all phylogenetic distances (0.2 to 5.0)

INTERPRETATION

Pangenome structure (% core, openness) reflects ECOLOGICAL STRATEGY, not evolutionary ancestry.

- Closely related species can have very different pangenome structures

- Distantly related species can converge on similar structures