**Dating**: molecular dating analysis for *Rhizobiales*.

**Gene\_Gain\_Loss:** gene gains/losses analysis

**Gene\_Tree of *nodABCIJ*:** the phylogeny of *nodABCIJ*

**GTA:** phyletic pattern analysis of the genes encoding GTA (gene transfer agent)

**Lifestyle\_ASR:** Ancestral lifestyle reconstruction

**Phylogenomic\_tree:** Phylogenomic tree of *Rhizobiales*

**Rhizobia\_correlated\_genes\_representative\_genomes:** genes significantly correlated with nodulating members using the representative genomes

**Transition\_Rate:** transition rate analysis using BayesTraits multistate