

## **Description of Additional Supplementary Files**

### **Supplementary Data Legends:**

**Supplementary Data 1.** Bacterial strains isolated from *M. littoralis* R108 nodules and behaviors

**Supplementary Data 2.** Genome size of *Ensifer adhaerens* strains

**Supplementary Data 3.** *Ensifer adhaerens* general genome features

**Supplementary Data 4.** Primers used

**Supplementary Data 5.** matK sequences used to reconstruct the evolutionary history of IRLC species

**Supplementary Data 6.** Biolog data normalized means PM01 and PM02

**Supplementary Data 7.** List of T4-T173 specific coding sequences

**Supplementary Data 8.** List of bacterial strains used in this study