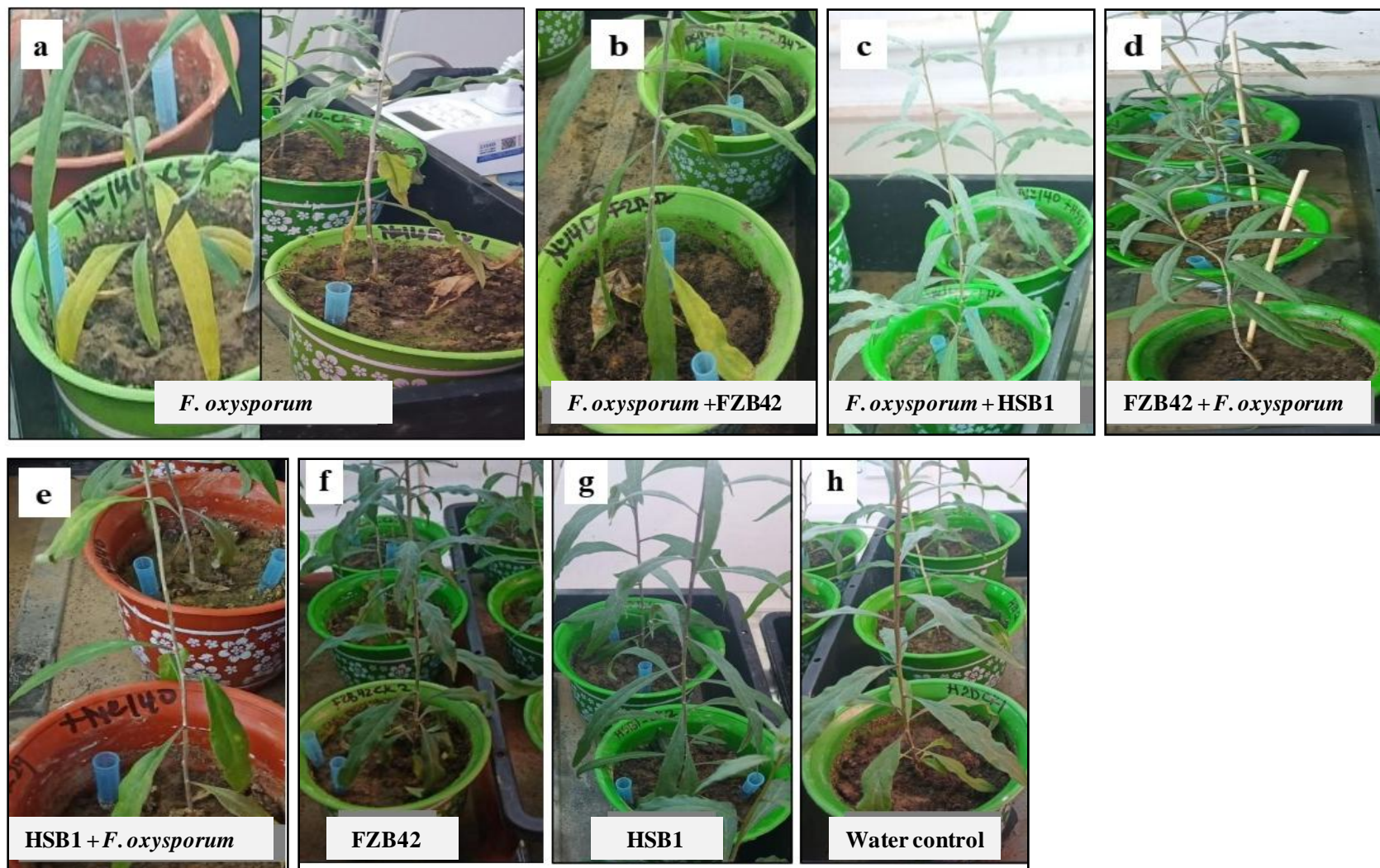


Figure S1

**Figure S1.** Growth promotion experiment. Assay 1: Water control seedlings (a), HSB1 treated seedlings (b) and FZB42 treated seedlings (c); Assay 2 : Water control seedlings (d) and HSB1 treated seedlings (f).





**Figure S2**

**Figure S2.** Images of wolfberry seedlings germinated seeds that had been subjected to eight different treatments during the biocontrol experiments. Treatment with *F. oxysporum* alone resulted in severe leaf yellowing and loss (a). Treatment with *F. oxysporum* + FZB42 resulted in 1-2 leaves turning yellow (b). Treatment with *F. oxysporum* + HSB1 resulted in no observable symptoms (c). Treatment with FZB42 + *F. oxysporum* resulted in no observable symptoms (d). Treatment with HSB1 + *F. oxysporum* resulted in weak leaves that were yellowing (e). Treatment with FZB42 alone resulted in no observable symptoms (f). Treatment with HSB1 alone resulted in no observable symptoms (g). Control treatment with water alone resulted in no observable symptoms (h).

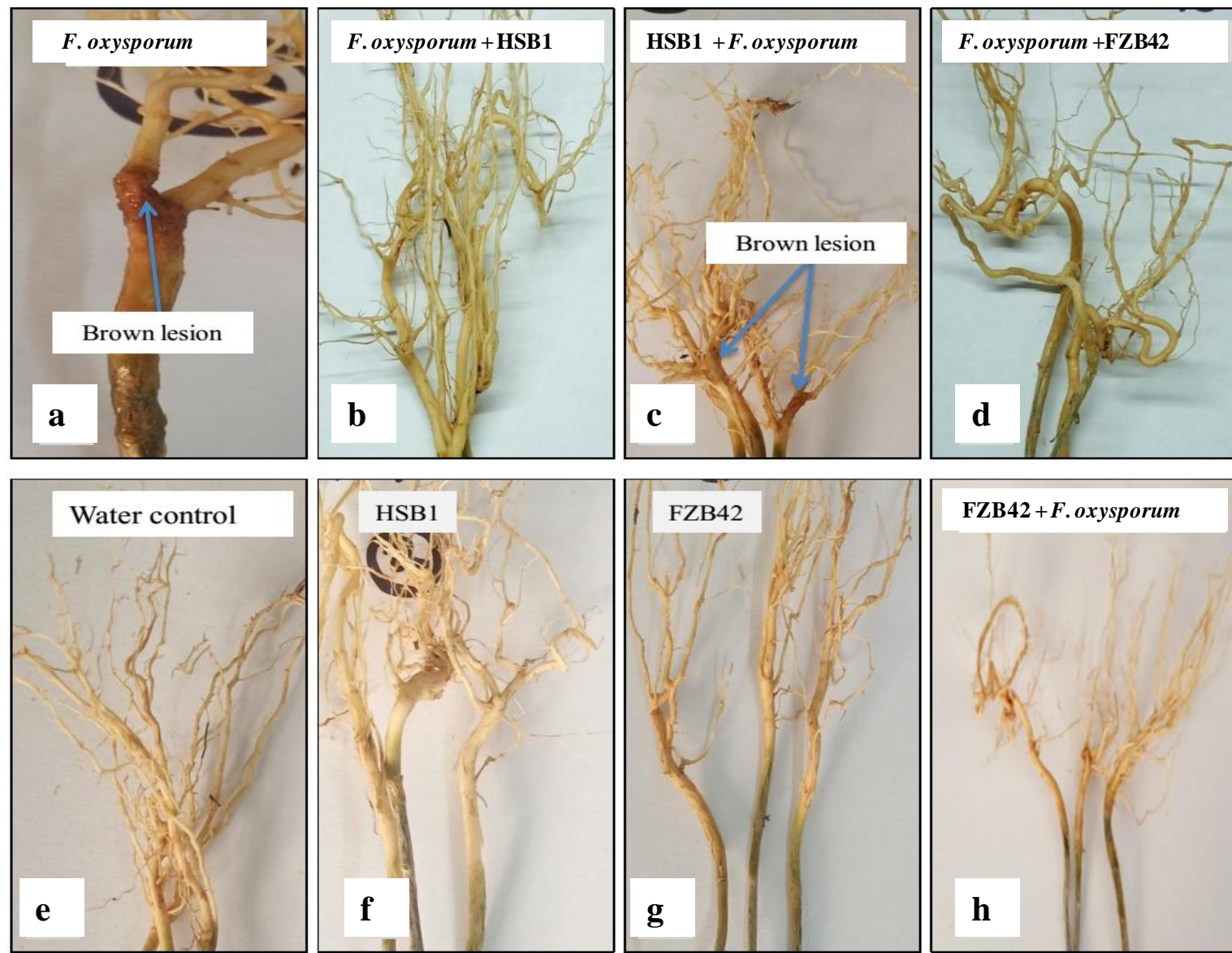
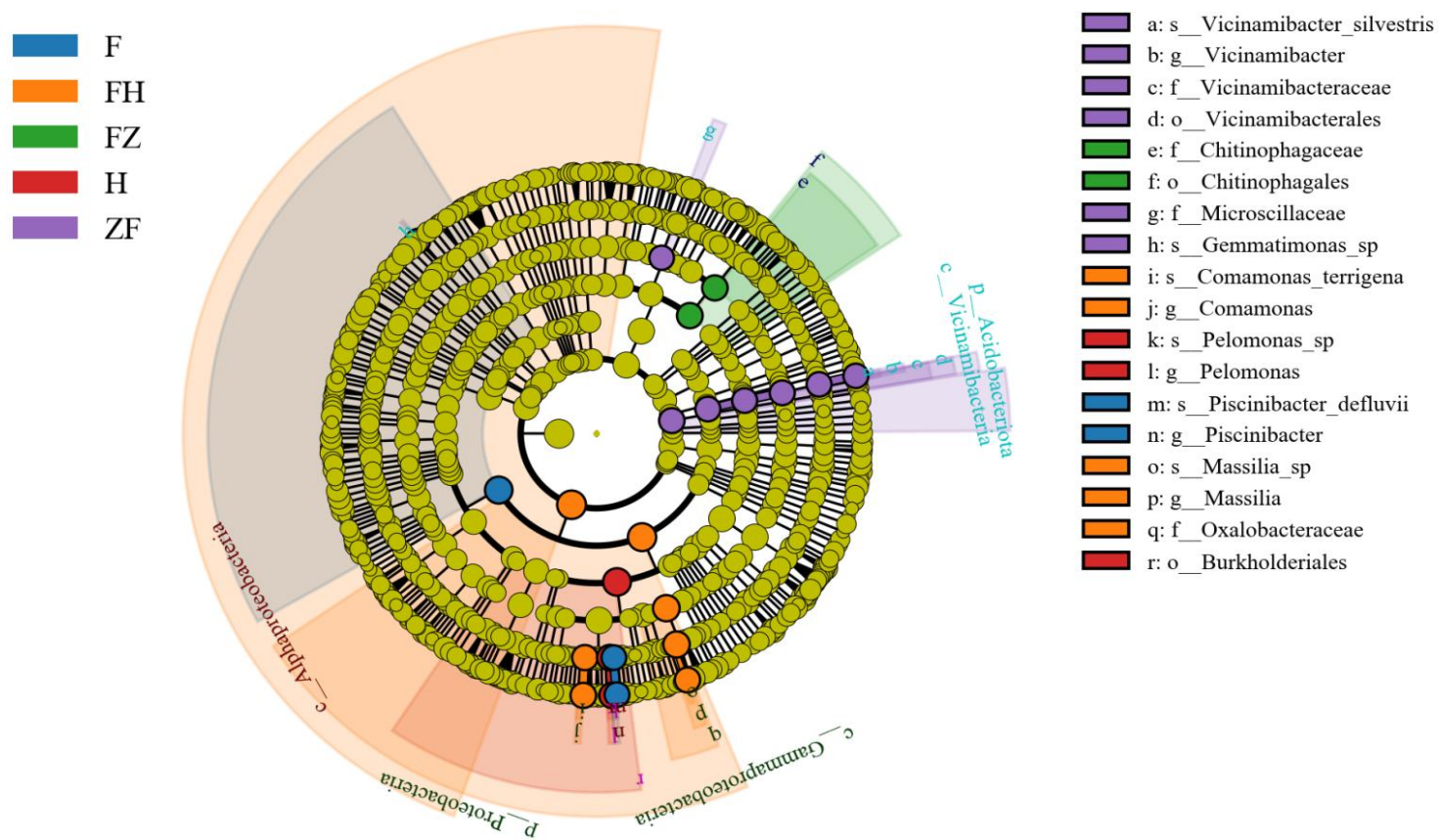


Figure S3

**Figure S3.** Images of wolfberry seedling roots after treatment with *F. oxysporum* alone (a); *F. oxysporum* + HSB1 (b); HSB1 + *F. oxysporum* (c); *F. oxysporum* + FZB42 (d); water control (e); HSB1 alone (f); FZB42 alone (g); and FZB42 + *F. oxysporum* (h).





**Figure S4**

**Figure S4.** Cladogram comparing treatment-based variation in bacterial communities using LEfSe analysis. The legend to the left of the cladogram color-codes each treatment: F= *F. oxysporum* alone (blue); FH = *F. oxysporum* + HSB1 (orange); FZ = *F. oxysporum* + FZB42 (green); H = HSB1 alone (red); and ZF = FZB42 + *F. oxysporum* (purple). The legend to the right of the cladogram shows the predominant orders (o), families (f), genera (g) and species (s) present in the wolfberry rhizospheres for each treatment.